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Original Articles

MATTER IN THE IONIZED STATE.*

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Detroit.

All matter, according to our present theory, is indefinitely divisible. It may be considered in the states of division we term mass, molecule, or atom, the first being, of course, demonstrable to the ordinary senses; the latter two being theoretical divisions, and capable of demonstration only psychologically, by the use of deductions in turn based upon certain observed physical and chemical facts.

This atomic theory of Dalton, as it is called, is the foundation of the modern science of chemistry. It is interesting to here note that while the name of Dalton is so closely identified with the Atomic Theory, as a matter of fact, he did little of the work which led to its formulation. Lavoisier probably did most of the actual experimental work which forms the basis of the theory, and he had really established the fundamental facts by the year 1786, when Dalton was but a boy of twenty years. Sixteen years later, or in 1802, Dalton published his first table of atomic weights. He was more a philosopher than chemist, and to him belongs credit for getting the work of his

predecessors into concrete form, and from this material, evolving in stated form the more or less generalized statements of the individual observers, thus developing a rational theory.

According to the theory as thus formulated by Dalton, a molecule is the smallest portion of matter that can exist alone, while an atom is considered as the ultimate division of matter; the smallest portion that can exist, even in combination. With this conception of the constitution of matter, the theory received strong support from the verification given by certain other discoveries. Quantitative chemistry had developed to such a degree that the proportions in which elements combined to form compounds could be determined, and the formulation of the atomic theory of the constitution of matter was hastened by the discovery of the laws of constant, reciprocal, multiple and compound proportion. The theory and the observed facts coincide so well, that there appears very strong evidence of a systematic scheme or plan in the chemical construction of matter. Gay-Lussac's law of the relation of gaseous density to atomic weight, Avogadro's law on the molecu-

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lar volume of gases; the law of Charles, which deals with the effect of temperature upon gases, and the law of Boyle relating to the pressure exerted by gases and liquids, all strengthen the Atomic Theory. Stress must be laid here tonight, however, upon the important consideration that while the observed facts support the Atomic Theory, *they do not limit it.*

It is to be noted that the Atomic Theory is an essentially physical theory, upon which has been erected a great chemical superstructure. The more recently discovered chemical facts, however, have led to the conception that the chemical atom must be different from the physical atom. Especially with the development of electrochemistry, have new properties been found, which are incompatible with the simple atomic condition of Dalton. When Roentgen promulgated the discovery of the X-Rays in 1894, to be shortly followed by the discovery of radium, a crisis was reached for the Atomic Theory, and either the theory itself would have to be abandoned for some new, and yet unformulated one, or else it would have to be amplified, to cover the newly discovered facts. With the knowledge obtained from the study of the X-Rays, and the emanations of radium, many old observations receive new significance. Brief reference may be made as follows:

The early frictional electric machines produced sparks, or heat, light and sound, and a limited amount of chemical action, but led to no recognition of the nature of the electricity itself. Geissler, in the early '70's produced the tubes named after him, in which the electric spark was led through a comparatively poor vacuum. Various gases were used, the color of the light produced being dependent upon the particular gas. But little heat resulted from the passage of these modified sparks, which were made possible by the reduced pressure of the

air or gas within the tubes which was only about .015 pounds per square inch. The electric current, in the form of a spark, passed directly from the anode, or positive pole, to the cathode or negative pole, and these Geissler rays must be considered to be nothing more than modified sparks. Much interest was evidenced in these Geissler tubes, and in 1879 Crookes, by the simple expedient of reducing the pressure of the gases in his tubes to .000015 (pounds) per square inch revealed new fields of investigation for the scientists of the world. These new tubes always produced a light, apple-green light, regardless of the gas contained. Definite rays were developed, which appeared to stream from the cathode alone, instead of passing from the anode to the cathode. These rays could not be light, for they are sharply deflected by a magnet. They conduct electricity. When impinging upon the vanes of a movable wheel, rapid revolution results. They can be demonstrated to be parallel in distribution, and when intercepted, they produce great heat. If electric currents be passed through parallel rays, these rays diverge, in a manner exactly analogous to a pair of magnets, suspended near to each other, or to a pair of freely suspended wires, through which a current of electricity is passing. Crookes also found that metallic mirrors suspended within the vacuum tube would reflect these rays. Little was learned of the nature of rays thus produced, and for a number of years, radiant energy, as it was called, was of much speculative interest to physicists.

In 1894 Roentgen investigated these rays, with particular attention to their effects *outside the tube*. He found that their properties were greatly altered by reflecting them through the walls of the tube by inserting a metallic mirror into the path of the rays streaming from the cathode. These reflected rays, when examined outside of the tube in which they

were generated, differed in many respects from the rays as produced by Crookes. They were no longer deviated by magnets or electric currents, nor could they again be reflected, refracted or polarized. New properties were discovered in these rays. For instance, when they fell upon certain salts, fluorescence appeared. They penetrate wood, flesh, glass, etc. They reduce the silver of the photographic plate and they destroy the lower forms of life. They travel in straight lines, and when they pass through gases, they produce some altered conditions in the ultimate structure of the gas traversed, whereby the gas becomes an immensely better conductor of electricity.

Rays presenting similar properties emanate from radium and its preparations. During the last five years, much study has been given to these rays, and the results of this study are embodied in the Electronic Theory which may be considered an amplification of the Atomic Theory. According to this addition to the theory, elements are composed of atoms, which in turn are composed of more minute particles, termed electrons. The atom of hydrogen, for instance, is assumed to be composed of something over 800 electrons, each carrying, or possibly being composed of, a unit charge of negative electricity. These 800 separate negative charges are held into one co-ordinate whole by a positive charge, of sufficient value to hold the negative charges into place. When some force, as an electrical discharge from an exterior source, acts upon the atom of hydrogen with sufficient force to dissipate or remove this retaining positive charge, the negative charges, or electrons are liberated as free particles, to evidence themselves as cathode rays; for instance, when this result occurs in a Roentgen tube, containing a rarified gas. *Since all gases, when treated in the Roentgen tubes, by the same currents, produce*

the same rays, the natural assumption must be that all electrons are the same in character. If this be true, the ultimate constitution of all matter is the one thing. The eighty odd different elements then must be but variations of the one primeval substance. If 800 electrons per atom is hydrogen, 1,600 may be some other element, and 3,200 still another. The transmutation of the elements, the dream of the alchemist, then becomes possible. Recent results, which appear to demonstrate the change of radium to helium, and the degradation of copper to lithium, results obtained in the coldly sceptical scientific laboratory, *not* the philosophical production of the heated brain of the theorist, make the electronic theory assume formidable proportions.

Under certain physical conditions, some chemical compounds develop peculiar phenomena. For instance, if a lump of sugar be dissolved in a glass of water, the water remains a non-conductor of electricity, and its freezing point is lowered, in exact proportion to the amount of sugar thus dissolved. If, however, a lump of common salt be substituted for the sugar, the solution thus secured conducts electricity easily, and the freezing point presents abnormalities, and the more dilute the solution, the greater the proportional abnormality. Stress is here laid upon the fact that the more dilute the solution, the greater the departure from the normal physical result.

More space cannot be given at this time to further illustrate the remarkable results obtained by the apparently simple act of dissolving a solid, except to note that a substance in solution no longer follows the laws governing solids. Instead, the moment a solid is dissolved, especially capable of demonstration for salts in solution, these solids conform to the laws of gases.

It is assumed that the act of solution

separates the compounds into their component elements, in proportion as the solution is dilute. The freed atoms composing the compound, each carrying their free charge of electricity, are different from the atoms as we know them chemically.

Matter in the ionized state, then, may be here defined as matter existing in the free atomic condition, each atom carrying a charge of free or unneutralized electricity. This charge of electricity may be positive or negative in character, hence we may consider these ions as electropositive or electronegative. Matter may exist in this state, either in the gaseous or the liquid condition (in a solution). The conduction of a current of electricity through conductors of the second class (liquids, fused solids, etc.) is dependent upon this ionic state, and liquids that are not conductors contain no ions. An element in the ionized state possesses different properties from those generally associated with that element. Chlorine exists in the diluted salt solution, for instance, in the ionic state, but it is not evident by its color, odor, bleaching power, etc. Direct through the solution a current of electricity and the ions travel each way to their proper electrodes, deliver up their charges of electricity and are set free as ordinary chemical atoms. The chlorine bubbles out of the solution and quickly makes its presence known by all of its chemical and physical effects.

It must not be assumed that whenever a compound goes into solution, that its atoms assume the ionized state. As a matter of fact under our present limitations of experimental knowledge, most of the proved up experimental work has been done in aqueous solution, the dissolved compounds being salts as a rule, using the term salt in its restricted chemical sense. From the associated chemical and physical phenomena, the relative degree of ionic dissociation can

be determined. It is noted that certain substances added to solutions will increase the dissociation, while other substances prevent, to some degree at least, the ionization. As an example, copper in solution may be cited. It has been determined that a solution of cupric sulphate of the strength of .015 grams per liter, is deadly to certain lower forms of life. A very efficient method for water purification in reservoirs and ponds contaminated by low forms of vegetable life that injure the taste of the water, is based upon this fact. The mere act of rowing around such a pond or reservoir a boat which has suspended over its side a sack of cupric sulphate will absolutely destroy the offending organism, yet the amount of the copper dissolved in the water is so infinitesimal as to almost defy detection, and is in no way deleterious to the qualities of the water for human consumption. The condition for greatest ionization is here obtained, that is, extreme dilution, and the copper ions destroy the vegetation. You will recall the statement made earlier, that the degree of ionization increases with dilution. It is not the amount of copper salt in solution that is of import: it is the amount of copper in the ionic state. The same organisms that perish in a solution containing only .0015 grams per liter of copper sulphate in aqueous solution, will tolerate 160 grams of the same salt in alkaline solution, if sugar be added. Here the ionization is prevented by the presence of the sugar, hence the lessened activity.

The same thing is very well shown in the case of carbolic acid. It is easily demonstrated that if equivalent quantities of this compound be dissolved in water, and to one add sodium chloride, and to the other sodium acetate in equivalent amounts, the disinfecting properties of the first solution greatly exceed those of the latter. Nevertheless, carbolic acid is much less soluble in a saline

solution than in the acetate solution.

The mercury salts offer excellent illustrations of the ionic activity. Taking solutions of the halogen salts of mercury, each containing exactly the same amounts of mercury per volume, and wide variation will be found in the bacteriologic activity. It must therefore be evident that it is not a question of how much mercury, but the condition of the mercury, which determines its value as a germicide. The bichloride is the salt ordinarily thought of as the active germicidal agent of the mercury group. It is soluble in about 16 parts of water at ordinary temperatures. The iodide, on the contrary, is but slightly soluble. It has been demonstrated, however, that the latter salt is much more active than the former, from the bacteriologic point. The mercuric iodide soap of a well-known manufacturing firm undoubtedly owes its well-proved success to the ionic state in which the mercury is liberated and used. Mercurous chloride, or calomel, is another compound which presents very limited solubility, associated with remarkable activity. It has been demonstrated, I believe, in Europe, that the application of a calomel paste to the exposed surfaces, with contact for a certain length of time, is sufficient to secure immunization, if applied immediately after exposure to infection by the spirocheta pallida. It has been stated that this result is not obtainable by any other germicidal measures. The writer is not a syphilologist, yet ventures to predict that precisely the same results may be obtained with other very slightly soluble salts of mercury. The experience of the profession has shown that mercury is the only agent to be depended upon in the treatment of syphilis. The same experience has demonstrated the efficacy of the protoiodide as a most desirable combination and some physicians now use this compound from the very begin-

ning of the disease. From the standpoint of the chemist, this is ideal treatment, for a large amount of mercury in its most active, or ionized state, can be thus exhibited, in an eligible form.

Reverting again to copper, it is well known that if water containing bacteria be placed in a polished copper vessel for a certain time, all the bacteria are destroyed, yet the water will not acquire enough of the metal to affect its taste. Here an infinitesimal amount of copper is dissolved, and in the extremely dilute, or properly stated, ionized state, the copper ions destroy the bacteria, possibly with the electric charge they carry. It is pleasant to picture the electrocution of our enemies, the pathogenic bacteria, by so simple a method. It is well known that bacteria will not grow well in gold or platinum vessels, and that the passage of a platinum needle over a culture of rapidly growing bacteria, leaves a streak of death behind it. Many elements show such remarkable properties, when studied in very dilute solution.

It was stated heretofore, in this paper, that the ionization might be prevented by the addition of certain substances to the solution, as in the case mentioned, the alkaline solution of copper, containing sugar. It has long been well known that a mixture of two excellent germicides might make a solution not at all active. This we may assume is due to the fact that each prevents the ionization of the other. An amusing result of this fact, not always recognized in the past, is presented in the history of a certain product made in the city of St. Louis. One firm had a germicidal solution of large sale. A rival firm made a similar solution, but much improved, according to the reading of the formula. To go after the bacteria with this new preparation appeared like hunting partridge with an eight-bore shotgun; it didn't appear possible that anything could get away, for if one germicide did

not get them some other of the many present would. The compound was launched with great bombast, and it was distributed with all the thoroughness that plenty of money could secure. In the course of a few months most of it returned to the manufacturer, for the great germicide would not keep. Instead it grew full of moulds. As a germicide it was about as valuable as a solution of vinegar.

Leaving bacteriology, we learn that in the physiology of the body this ionic activity plays an important role. Cane sugar, when ingested, is inverted to grape sugar, and thus absorbed. It can be demonstrated in the test tube that this inversion takes place with the use of many acids, but that the rate of inversion is directly as the amount of ionic hydrogen present. The same thing applies in the matter of the digestion of proteid. For instance, albumin may be digested by pepsin in the presence of either hydrochloric or acetic acid. Taking equivalent amounts of all the material, it will be found that the rate of digestion proceeds very slowly in the presence of the acetic acid. In fact, the rate will be several hundred times slower than when hydrochloric acid is used. We find in the laboratory experiments that the hydrogen of the hydrochloric is present in the ionized state, to a degree at least 300 times greater than the hydrogen in the acetic acid. This fact assumes significance in medicine in the treatment of diseases of the stomach, and coincides with many facts already clinically determined, where acetic, lactic, and other organic acids have been found in the stomach contents, in connection with difficulties in digestion, etc.

The ionic theory applied to the production of hydrochloric acid in the stomach brings out some interesting considerations. The physiologists say that the acid is a specific secretion of certain cells in the gastric mucosa. This is as

far as Hammarsten goes into the subject. Simon handles the subject as follows: "While it is thus clear that the hydrochloric acid is furnished by the parietal cells, we are as yet ignorant of the mechanism by which this is accomplished. A free acid is manifestly not present in these cells.... It thus follows that a substance must either be present in the cells which is capable of yielding hydrochloric acid when secreted to the outside, or a mechanism must exist by which the hydrochloric acid, though formed within the cells is at once eliminated. The latter view is now generally held. That the hydrochloric acid is derived from the chlorides of the blood can be regarded as an established fact." Later on, in the same chapter, Simon gets very close to the real explanation, in the light of the ionic theory, but misses the precise facts of the case.

We have pointed out that the ionized state is dependent upon dilution, and that complete classification of any salt is dependent upon an extreme but fixed point of dilution. To return to the first part of this discussion, we must recall that Crookes secured his cathode rays because he pushed his vacuum to a degree far greater than Geissler ever did. The gas in an Xray tube may be assumed to be an extremely diluted or rare one. Under this condition the passage of the electric spark is able to bring the corpuscles of gas into a form discernable to us, in the multiform effects of the rays. That this is not the result of changes in the electricity passed into the tube, but of the gas we well know, from the changes which take place within the tube itself. The vacuum changes in use, and a low tube, as the radiographist calls it, becomes a high tube under constant use. However well constructed tubes may be, they ultimately reach a point when the vacuum must be lowered by the admission of new material, which need not be of necessity the

original gas contained in the tube.

It has been emphasized several times that in solution an extreme dilution is necessary, in order that the salts may assume the ionic state. Having reached this state, we are able to show by directing the travel of these ions by a current of electricity, that all ions do not travel with the same velocity; that is, that each element in its ionized state has a special velocity of its own. We also know that substances in solution conform to the laws of gases, and not to those of solids. As a body of gas is assumed to be composed of innumerable particles, all in a state of rapid motion, we explain the pressure of gases upon the retaining walls to be due to the impact of these minute particles against these walls. We can apply the same reasoning to solids in solution, and the extent of this solution pressure is far greater than ordinarily realized. It can be measured exactly as we measure any other kind of pressure, and pressures as high as 60 to 65 pounds per square inch have been observed. If, for instance, a dilute solution of sodium chloride be enclosed in a porous container, so constituted that water can pass through the pores but the salt cannot do so, on immersing this arrangement in pure water, this pure water attempts to force its way through the pores of the container, entering the salt solution, to dilute it, and liberate the chlorine and the sodium to the ionized state. If the porous container be sealed shut, unless it be very strong, it will be ruptured, bursting from the pressure upon it. If, on the contrary, this porous jar be strong enough, a tube may be fitted into the top of it, and the pure water may be prevented from entering by pressure applied to the salt solution. The amount of pressure needed will surprise the unfamiliar experimenter, for as suggested heretofore, it may rise to the vicinity of 70 pounds per square inch. Every surgeon is recog-

nizing this fact when he uses normal saline solution instead of pure water in his surgical work. The cell is the porous container, and the blood serum is the salt solution, in analogy to our experiment used in illustration.

When the retaining wall is permeable to the dissolved material, this wall or diaphragm assumes a special function in separating the ions, as they segregate into new combinations as the results of their differing velocities. Suppose, for instance, we have any suitable container, holding pure water. Immersed in this we place a suitable porous container, permeable to the elements. Into this porous container we place water, sodium chloride and carbonic acid. In accordance with the dilution of these will the elements exist as free ions. After a few moments, examination of the formerly pure water, around the outside of the porous container, will demonstrate the presence of hydrochloric acid. Here we have them, secretion of hydrochloric acid taking place, without the presence of any specifically specialized life function entering into the matter. We have reproduced the essential factors of parietal cells of the gastric mucosa, and another so-called organic chemical process proves to be but inorganic, after all.

The explanation is not hard, when we know that it can be demonstrated by other means that the chlorine and hydrogen ions travel at greater velocity than the sodium and carbon; therefore the first two pass through the membrane faster than the others, to meet and combine as hydrochloric acid. The ions doubtless exist in the pure water, at infinite dilution, as free ions, but our crude tests applied to the solution bring them into true chemical combination when we precipitate the chlorine in an insoluble chloride.

The study of this subject is fascinating in the extreme, and we can predict wonderful results from its pursuit. If

no new discoveries be made the assistance given in the way of explaining many things now known only in the abstract makes further investigation worth the effort. The action of ferments and enzymes, especially those results obtained by metals in the colloidal state; the exact function of the minute amounts of arsenic, iron and manganese found in the human system, and the effects produced by the administration of elementary compounds generally must assume new significance to the physician, when viewed in the light of this amplification of the old Atomic Theory.

The effect upon the lower forms of life, of elements in the ionized state, naturally brings up the question of the effect of such ions upon the human system, when administered internally or otherwise, as medicinal agents. The extreme dilution so favorable to extensive dissolution and ionization recalls the practice of the followers of Hahnemann who practice medicine upon the basis of the dictum *Similia Similibus Curantur*, and the theory that medicines are dynamatized, or potentized by a method of preparation peculiarly developed by Hahnemann and his followers. It is sufficient to here say that the basic idea of this school of medicine is treatment by similars, and the practice of those who pretend to be homeopaths today is so far departed from this basic principle of the founder of the school that it is no longer proper to consider them true homeopaths. The other principle associated with the practice of Hahnemannism is the diluted dose, a principle introduced by the founder in the latter part of his career. Much ridicule has fallen upon these practitioners for their 200th potency, etc. As we read the laborious directions and weird methods

of preparation outlined by Hahnemann, partaking as they do of everything between the incantation of the aboriginal medicine man and the blind theologic faith of that anomalous being who calls himself a Christian Scientist, we can see much that is ridiculous to a sane mind. The writer is inclined to believe at present, however, that Hahnemann had a glimpse of a great scientific principle, which he incorporated into his system and buried in a lot of rubbish bearing some resemblance to therapeutics. Liebig, the great German chemist, was contemporary with Hahnemann, and he, too, recognized many chemical phenomena which are easily explainable by the ionic theory. To read his Chemical Letters again with the aid of this theory is a renewed delight. Even the elder Virchow, a hard fighting opponent of Hahnemann, made the following admission: "On the contrary, a minimum of a very energetic exciter may produce lasting and great results, in consequence of the continued spread of the original catalytic movement. This is one of those facts which render the possibility of the so-called homeopathic effects intelligible. We do not mean to admit by this statement that homeopathy has any claim to a scientific character."

The regular school of medicine, which we represent, is not tied down by any doctrine, nor is it built upon the dictum of any man. We recognize all that is scientific, and ask not its source.

Matter in the ionized state, recognized as such, will enter largely in the therapeutics of the future, and the attention of the profession should be directed to the study of the therapeutic effects obtained when medicinal agencies are thus exhibited.

DYSMENORRHEA*

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If I understand it correctly, those who have been asked to take part in this symposium upon the disorders of menstruation are expected to stick to the more practical aspects of their respective subjects. Interesting as such theories may be, it certainly is asking too much of the busy practitioner to sit and listen to theories regarding menstruation and its disorders. Their time would be more profitably spent in the careful consideration of one of the many cases of dysmenorrhea they are obliged to treat in their own practice. Yet it will do no harm and may be productive of some good if a résumé be presented of what we consider essential in any consideration of dysmenorrhea. If my deductions as regards the diagnosis, prognosis and treatment of the disorder do not agree with yours, so much the better, for the value of any symposium or any medical paper before a society such as ours lies not so much in the paper as in the discussion it may arouse.

Literally, by dysmenorrhea is meant catamenial discharges accompanied by pain. By common acceptance, however, this definition has been extended so as to include the pain preceding or following the regular monthly discharge of blood from the uterus, provided such pain can etiologically be ascribed to the menstrual flow.

If menstrual pain were simply an indication of a disordered genital apparatus, the task of relieving that pain

would be a comparatively simple matter. But the reverse is the case. The discharge of blood from the engorged uterus is but one of the manifestations of the menstrual function. The entire organism is affected by the recurrence of the menstrual flow, as shown by the changes in temperature, pulse and blood pressure. Hence the general make-up of the individual, both nervous and physical, must be taken into consideration in any endeavor to ascertain the cause of pain during the menstrual period. It is most convenient, therefore, to group patients suffering pain at their menstrual periods into two large divisions.

A. In this division may be placed those patients who suffer during menstruation because of defects in their general nervous system, very slight or no derangements of the genital apparatus being ascertainable upon physical examination.

B. In the second division may be grouped those patients whose pain is associated with and probably due to one or more distinct local pelvic lesions.

It must not be lost sight of that any classification of such a symptom complex as dysmenorrhea must be more or less arbitrary and not altogether satisfactory. For example, while a patient may have distinct local lesions, such as an endometritis or a displaced uterus, the menstrual pain may be so out of proportion to the extent of the lesion or lesions as to relegate the patient to the first rather than the second division. But, on the whole, I believe the above simple classification will be useful and

* Read before the Michigan State Medical Society, at the Saginaw meeting, May 15, 16, 1907, and approved for publication by the Publication Committee.

hold good in the large majority of instances.

A. First division. Pain due to general and not to local causes. Patients in this group are the most discouraging of any with which the physician has to deal. No local cause can be found for the most excruciating pain which may attend their menstrual periods. The uterus and its appendages are usually well developed and apparently perfectly able to perform their functions, yet menstruation is a perfect nightmare to the patient, because of its accompanying suffering. Usually such a patient will date her poor health from the time of the ushering in of menstruation. Close questioning, however, of the patient herself or the members of her family will often show that her girlhood was not free from nervous manifestations. It may be learned that she was excessively shy as a child, that she was subject to violent outbursts of temper or of tears or some of the manifestations of an unstable nervous system. The family history will often show neurotic tendencies or actual nervous or mental derangements in father, mother or grandparents. There may be a distinct history of alcoholism, syphilis or such diseases as epilepsy or chorea in the immediate or remote members of the family. The personal history of the patient may show neglect as far as her education or control was concerned. She may have been indulged in every whim so as to do away with whatever self-control she could have acquired through proper instruction.

Such an individual is ill-fitted to withstand the trials and stress of womanhood. The systematic changes accompanying menstruation are enough to overthrow the small amount of will-power she may have retained up to the time of puberty. As the expression is, she goes all to pieces at each menstrual

period. Depending upon the exact condition of her nervous mechanism she may at these times be only slightly hysterical from the pain, or she may be almost maniacal under her sufferings. We are all, I think, familiar with this type of patient. They belong to the class commonly known as neurasthenics and are, as a rule, greatly neglected by the profession at large, principally, I believe, because they respond so poorly to treatment. There is no question about their intense suffering at the menstrual period, but on the other hand they suffer at other times perhaps just as much. The most careful physical examination of the pelvis may reveal no abnormality, or the genital organs may be somewhat undeveloped. Usually, however, women of this type are not undeveloped. Physically they may appear to be in fairly good condition. In reality, their nervous systems are greatly deranged.

The treatment will depend upon the peculiarities of each individual case, although any treatment is more or less unsatisfactory. As Oliver Wendell Holmes once aptly remarked, to cure such people, one would have to begin back two or three generations. Yet if the practitioner be the right kind of a man, he can do much for these unfortunate women. He certainly can do more for them than any specialist for he has their confidence and has more influence over them than the comparative stranger. He can do much by way of prophylaxis in regulating the lives of children under his charge. Certain children he knows must have certain inherited neurotic taints, for he is thoroughly cognizant with their family histories. Such children he can watch over, guard and protect and see that they be given the best possible chance. When such a child reaches maturity his knowledge of her case and his intelligent sympathy may do much to make her lot less difficult. His success with patients of this class

will usually be directly proportional to the breadth of his own mental equipment and character. The easiest course to pursue is to pass them along to the next man without actually trying to help them. But this is hardly fair to either ourselves or the patients.

For such patients local treatment is not called for and is actually harmful, since it directs the thoughts of the patient toward the genital apparatus and sexual matters. Having assured himself that there is no local difficulty, the practitioner should use all his influence to prevent such patients, as are under consideration, from being operated upon. For the patients themselves and the wornout relatives and friends will seize upon any excuse for an operation. Uteri have been dilated and curetted, ovaries have been resected or removed where there was absolutely no pathology to warrant such operations. Hardly a month goes by that I do not have a number of patients referred to me for operations which are absolutely unindicated, and my experience is that of all gynecologists.

Not long ago a single woman of twenty-two came to me for examination. She was a typical neurasthenic with her mind centered upon her genital apparatus and more particularly upon her ovaries as the seat of all her troubles. She had been having electric treatments for three months for painful menstruation and pain in the ovarian regions. She was told if she was not relieved at the end of this time she must lose her ovaries. Bimanual examination showed no lesion in the pelvis, uterus, tubes and ovaries being in good position and quite normal. Yet the patient and friends almost insisted upon my performing hysterectomy, so firmly were they convinced that such an operation would end her trouble.

In concluding this part of our subject I may add that if the condition of such

a patient as we have been considering is pitiable, it becomes doubly so after the removal of the ovaries. The menstruation ceases and in a sense the dysmenorrhea is cured, but at the expense of additional suffering to the patient. She will tell you that she is far worse than before the operation and that her life has been made unbearable by her sufferings after all she has sacrificed to secure good health.

B. Second division, where the dysmenorrhea is dependent upon some pelvic lesion or lesions. For the sake of clearness and convenience, this division may be subdivided according to the local causes giving rise to the dysmenorrhea:

- (a) Malformed or undeveloped genital organs.
- (b) Diseases of the uterus.
 - 1. Displacements.
 - 2. Tumors.
 - 3. Inflammations.
- (c) Diseases of the ovaries.
- (d) Diseases of the tubes.

Here again it must be emphasized that any classification of dysmenorrhea from an etiologic or other standpoint must be more or less inexact and quite arbitrary. For example, it is quite evident that a patient with a displacement may have and, in fact, as a rule, usually does have accompanying disease of the tubes or ovaries. Hence from an etiologic standpoint her dysmenorrhea could be considered under a number of subdivisions. But as I have already stated, speaking broadly, we can group our patients with dysmenorrhea in either of the two divisions without inconsistency.

(a) Malformed or undeveloped genital organs. Undevelopment of the uterus and its appendages does not, in my experience, give rise to dysmenorrhea, unless it be accompanied by a defective or vitiated nervous system. The pain ac-

companying the menstrual flow is not so much an expression of the inability of the uterus to perform its function without giving rise to distress, as it is a manifestation of an organism with an unstable nervous system. Here the genitals, as well as the other great systems of the body, are poorly developed and pain is the result. When the rest of the body is well developed and rightly balanced, a woman may have an infantile uterus and ovaries, menstruate only infrequently and very slightly, yet without pain. The lesson to be learned from this is that an undeveloped uterus does not necessarily call for treatment, especially if in other ways the woman be healthy. If she suffers from dysmenorrhea, treatment should be directed principally to her general condition. Direct stimulation to the uterus and its appendages by electricity and other means is of doubtful value and may be productive of considerable harm through resulting infection and the direction of the mind of the patient too much toward her pelvic organs. Such women are too apt to drift into a state of semi-invalidism with fixed ideas regarding their pelvic suffering. Their thoughts should, whenever possible, be directed away from their pelvic organs, unless treatment, operative or local, be absolutely indicated.

On the contrary, malformations of the genital tract can very easily give rise to dysmenorrhea. Here the causes are distinctly mechanical and arise from an obstruction to the passage of the menstrual fluid through closure of the canal at some point. This closure can occur in any portion of the uterus or vaginal canal, including the hymeneal orifice. Retention of the menstrual fluid gives rise to the colicky pains during the first menstrual periods. These pains, if unaccompanied by menstrual discharge and especially if the other signs of retained menstrual discharge be present, should

lead to careful examination under an anaesthetic and the institution of the proper surgical procedure for the relief of the condition. Since the obstruction to the genital tract is usually low down, incision under proper aseptic precautions is usually sufficient to effect a cure.

(b) Diseases of the Uterus.

1. Displacements.

Uterine displacements in themselves probably do not give rise to painful menstruation. At least this is true of backward displacements, a statement which can be verified by questioning a series of patients with movable retroverted uteri without adnexal disease. And this is what one would expect, provided there be nothing within the uterus to change the characteristics of the menstrual fluid, so as to make its escape more difficult. The real reason for the dysmenorrhea accompanying backward displacements of the uterus lies in the accompanying inflammation of the endometrium, the tubes, ovaries and the pelvic peritoneum.

There has been much discussion regarding the relation of anterior displacements of the uterus to pain at the menstrual periods. It certainly is interesting to read Marion Sims' book, "Uterine Surgery," and observe the stress which is laid upon ante flexion, ante version and pin hole os as causes of dysmenorrhea. The uterus is incised in various ways in order to straighten its canal, uterine stems and intra-uterine pessaries are employed with the same object in view, but it is questionable whether the undoubted good results which followed such operative procedures did not arise from the free drainage, which was established for the purulent endometrial discharge, rather than from any aid which straightening the canal may have given to the escape of the menstrual discharge.

My own experience shows me that mere flexion of the uterine body upon itself does not necessarily give rise to any dysmenorrhea. A flexion, plus endometrial inflammation, however, will give rise to menstrual pain, a fact which can be very easily verified. Provided the walls of the cavity of the uterus are not pressed tightly against each other by reason of endometrial inflammation and provided also the fluid character of the menstrual discharge be not changed by the inflamed endometrium, the fluid blood will pass around any flexion without pain. In other words, the dysmenorrhea met with in these displacements is not mechanical, but is due to inflammatory causes.

(2) Tumors of the Uterus.

Here the dysmenorrhea may be both mechanical or due to inflammatory causes. A mechanical cause for dysmenorrhea and one often quite baffling as far as diagnosis is concerned, is an uterine polyp situated rather high up in the uterine cavity. The cramp-like pains so frequently observed in these cases at each menstrual period are due to attempts on the part of the uterus to throw off the polyp, which, because of its location, acts as a foreign body. A submucous fibroid is detached and cast out of the uterus by the same mechanism, accompanied by the same cramping pains.

Dysmenorrhea is not an uncommon accompaniment of tumors of the ovaries, both solid and liquid. Here it probably is not mechanical, but is due to the accompanying endometritis.

(3) Inflammation of the Uterus.

This is undoubtedly the most common cause of dysmenorrhea, and for the reasons hinted at in speaking of displacements of the uterus. The endometrial mucosa undergoes a variety of changes under the influence of the infective pro-

cesses. These changes are very liable to lead to hypertrophy of the glandular elements and of the other component parts of the endometrium. The engorgement at the time of the menstrual period leads to an approximation of the walls of the cavity so that what approaches an obstruction may result. If now the changes in the infected uterus have so altered the character of the discharge as to deprive it of its fluid quality, then we have the clotted blood acting as a foreign body above the obstruction. The uterus then forces out this body with the cramping pains so common to a certain form of dysmenorrhea. While endometritis with its sequelae will explain most of the cases of dysmenorrhea due to local causes met with in practice, I have been unable to make a satisfactory classification along these lines. For the present at least I do not think we are able to use clinically the elaborate subdivisions of endometritis, which, from the standpoint of microscopic pathology, can easily be made.

The so-called membranous dysmenorrhea is simply an exaggerated form due to the casting off of a whole or parts of the endometrium at each menstrual period. The passage of this membrane through the uterus gives rise to the most excruciating, cramp-like pains. This condition, as shown by microscopic examination of the casts, is distinctly inflammatory in its nature.

(c) Diseases of the Ovaries.

Dysmenorrhea may be said to be a very common accompaniment of acute and chronic inflammatory conditions of the ovaries. The pain is apt to come on before the menstrual period and may continue even as long as a week after the occasion of the flow. At times the pain ceases upon the establishment of the period, at other times it seems to be exaggerated by the onset of the flow. Because of these different types of the

dysmenorrhea, while it is undoubtedly due, in some degree at least, to disease of the ovaries, it would seem as if the pain probably arose from the accompanying endometritis.

(d) Disease of the Tubes.

The same inflammatory changes are apt to affect both tubes and ovaries, and it is not strange that tubal disease can give rise to dysmenorrhea in certain instances. This is proved by the removal of the diseased tubes and the retention of the ovaries, when the dysmenorrhea will in a large part subside. Still it is rather difficult to explain the relationship between tubal disease and dysmenorrhea and probably it will suffice for our purpose if we merely note that it exists.

Treatment of dysmenorrhea when due to local causes, medicinal and local.

My time only allows a mere outline of such treatment. The organs of elimination, the skin, kidneys and bowels should be kept active. Laxatives, a generous quantity of water to drink, and attention to the skin by warm baths will undoubtedly prove of value. A hot sitz bath when the flow is expected is often very beneficial. Hot water applications, as hot as can be borne, are often grateful to the patient. In the majority of instances the aim should be to start the flow as quickly as possible after the pain begins, with the hope that congestion outside of the uterus will thereby be relieved. One should avoid using opiates or alcohol for the relief of the pain, especially if the patient be susceptible to the relief and pleasure following the use of such drugs. Still, with severe pain, some relief will be insisted upon and must be furnished. In my hands codein has been found more useful than morphine, because it is less constipating

and depressing.

Local treatment. So-called local treatment oftentimes will bring great relief to the patient. It is unsatisfactory in that such improvement is apt to be merely temporary. Pelvic inflammation, whether of the uterus, appendages or adjacent peritoneum, often yields to rest in bed, hot water douches and vaginal tampons once or twice a week. Wherever the uterus is freely movable and can be readily restored to its normal position, it can be retained there by a properly fitting pessary. The condition of an inflamed and eroded cervix will greatly improve under puncture of the cysts and systematic application of Churchill's tincture of iodine. Yet it must be admitted that under the treatment outlined above relapses are frequent and the progress of the case is apt to be discouraging to both patient and physician.

Operative treatment. To accomplish the best results such treatment must be thorough. The physician must be competent to recognize disease in any part of the genital tract, for it will avail little if a uterus be curetted and still remain adherent and bound backwards to the rectum. The aim should be to restore the genital tract to as normal a position as possible. This may necessitate a whole series of operations such as dilatation, curettage, trachelorrhaphy, perineorrhaphy, operations upon the diseased appendages and a displaced adherent uterus. Most satisfactory results will usually follow such treatment provided the proper diagnosis has been made. The patient ought to be warned that she must not expect to be entirely free from pain for a number of menstrual periods, that recovery from menstrual difficulties is an extremely slow process, and that the most she can expect from the operation is being placed in a position where it is possible for her to recover in time.

MENORRHAGIA AND METRORRHAGIA*

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It is a trite old saying that the eye sees only that which it brings with it the power of seeing. Our conception of conditions and things is large in proportion to our knowledge of co-ordinating conditions and things, and we stray in our conclusions just in so far as our intellectual horizon is limited by ignorance of things beyond. The older writers looked upon uterine bleeding as a purely local affair of the uterus, but after the dead-house had yielded up its secrets, and abdominal surgery had thrown a search-light into the fog-obscurity of the unknown, and the microscope had made fine differentiations between natural and morbid phenomena, we began to learn that hemorrhage from the uterus, among other things, might be the result of a larger number of circumstances than our philosophy had previously taken cognizance of. The two words at the head of this paper are only terms representing the results of conditions of wide etiologic variation. They are, to use a rough and homely illustration, only the outcroppings of the ore, which may or may not lead to distant veins.

To understand the significance of increased or prolonged menstruation or of a bloody discharge from the uterus during the intermenstrual gap, one must positively know whether such discharge is the symptom of some nearby disturbance or the manifestation of a remote or general condition. To make a correct

diagnosis from uterine blood-sign, therefore, presupposes a good familiarity with general medicine, a knowledge of pelvic pathology, and the ability to analyze the processes intervening between cause and effect. And it is only on the basis of such knowledge that an intelligent and rational treatment can be determined on and carried out. Certain emergencies may demand empirical management, but without a knowledge of the underlying reason this can hardly be dignified by the appellation "treatment"; and while under certain conditions it may be impossible for one to arrive at a positive understanding of the exciting disorder until the microscope has decided the question, we do what we can, but generally with little satisfaction to ourselves and with but slight benefit to the patient. Fortunately those instances in which a diagnosis cannot be made after a little study of the case are rare, and the physician has usually abundant time for investigating the symptoms presented, and to determine the cause of the disorder toward which he must direct his efforts for cure.

As the expression of the presence of a pathological process within the body which may be unimportant or of serious moment, nature throws out this, literally, red flag of warning, and as it is impossible to determine without investigation what morbid state it may predict, a bloody discharge from the uterus should never be disregarded. It is the duty of the physician to find out why the flow is there, and then direct his attention to the cause. Many a woman

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has lost her life because of the physician's indifference and failure to determine that malignancy or other serious disorder and not the "change of life" was responsible for a sanguineous discharge. Nearly twenty years ago I called attention to the importance of a careful physical examination of every woman presenting a bloody discharge from the uterus, and grouped a number of dissimilar cases presenting almost identical symptoms. What was then written is as pertinent today as it was in 1888, and unfortunately there is the same necessity for reiteration.*

The practice of making a general systematic examination of every patient will greatly facilitate in arriving at a knowledge of the condition with which one has to deal, besides obviating the possibility of overlooking some detail of importance which may have great weight and bearing in arriving at a diagnosis. For convenience of diagnosis the examination of the patient should be considered under four heads, and the history of the case, as previously noted, should constantly have these propositions in view. Some such list as the following may be useful for guidance; it contains most, but possibly not all, of the principal conditions which may give rise to uterine bleeding either at the time of menstruation or during the interval between the periods. Uterine hemorrhage

* Illustrations of Bloody Discharges from the Uterus, and the Importance of Physical Examination in their Differentiation. Philad. Medical News, May 26, 1888.

An inguinal hernia giving signs of obstruction and partially reducible, may empty into a properitoneal sac in Hesselbach's triangle, a loop of gut being compressed against the neck of the sac.

Care must be taken in resecting the last true rib not to open the pleural cavity; for not only does this produce a pneumothorax, but an extensive subcutaneous emphysema may also result.

may be due to (1), disease of the uterus itself; (2), to disease of near or remote organs or parts; (3), to constitutional disorders; (4), to habits of life, atmospheric conditions, derangements of the nervous system and, more rarely, to psychic influences.

Classifying the conditions just noted, the hemorrhage may result from:

(1) Uterine Causes — Unsuspected pregnancy; threatened abortion; low implantation of the placenta; Metritis; Endometritis; Erosions of the os; Displacements; Polypi; Fibroids; Degeneration of the Uterine blood-vessels; Malignancy.

(2) Diseases of Near and Remote Organs—Adnexal disease (morbid conditions of the ovaries and tubes; of the Broad ligaments; of the Pelvic fascia and vessels); of the Bowel; of the Heart; Lungs; Liver; Kidneys; and of other abdominal viscera.

(3) Constitutional Disorders—Anemia; Plethora; Tuberculosis; Eruptive and other fevers; disorders of the Nervous system (Menopause; shock; fright; psychic disturbances).

(4) Habits of Life—Excessive venery; Indolence (obesity); Gormandizing; Alcoholic excess; Change of Climate (high altitude, sea air, great humidity); Change of occupation.

Ectopic gestation is usually preceded by a period of sterility.

A passage of feces or even of a small amount of gas, after an enema, does not gainsay the presence of intestinal obstruction.

In cases of amenorrhea do not forget the possibility of pregnancy—no matter who the patient is—and avoid the uterine sound.

AMENORRHEA*

RICHARD R. SMITH, M. D.,

Grand Rapids.

By amenorrhea we mean an absence of menstruation occurring between puberty and the menopause—before puberty and after the menopause a woman cannot be said to have amenorrhea. The term implies a pathological state in that this is not the usual one, and apt to be an accompaniment of diseased conditions, either general or local. We recognize also a physiological amenorrhea which takes place during pregnancy and lactation. We must regard the presence of menstruation during pregnancy as being abnormal and as calling for careful investigation and watching. Not so, however, with menstruation occurring during lactation. There has been a very prevalent idea handed down to us from our forefathers and religiously taught in our medical schools and text-books, that menstruation during lactation is not the usual state and that it was to be regarded as distinctly pathological. A more careful investigation of the subject, however, reveals facts which contradict this idea. Möller, in examining 427 nursing women found that in 60 per cent of these menstruation had reappeared. In about one-third of them menstruation had appeared during the first two months after confinement. Mayer, in 625 women that he examined, found a proportion of 57.8 percent menstruating. Heil, in 478 lactation periods found 48.9 percent were accompanied by menstruation. He finds also that the greater the number of pregnancies, the

greater the liability to the return of menstruation during lactation. One must then regard the presence of menstruation during lactation as at least as common as its absence, and I believe that as long as it is not attended by undue loss of blood or pain that it cannot be regarded as harmful. We may conclude also that menstruation at this time is not an indication to wean the child, as is sometimes taught, nor is there a liability to an atrophy of the mammary glands after menstruation begins.

Passing on, however, to amenorrhea in the ordinary acceptance of the term, we must regard it as usually abnormal. It hardly seems necessary to state that it is not in itself a disease, but simply a symptom. It may be caused possibly in the individual case by some local trouble, but is usually simply indicative of some constitutional condition. We may conveniently take this up under various headings:

First. Amenorrhea depending upon an occlusion in the cervix, vagina or an imperforate hymen. Although all occlusions are rare, the most common of these is the last named. In the examination of several thousand women, I recall but two causes in which this mechanical form of amenorrhea was present—both were instances of imperforate hymen. Congenital absence of part or all of the vagina, as well as defects of the cervix, are so uncommon as often not to fall within the experience of gynecologists who have seen a large material. Wherever the occlusion may be, the symptoms are about the same.

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The woman gives the history of never having menstruated, and there occur, periodically, attacks of pain. This pain may not, however, be severe. The menstrual blood dilates the genital canal above the obstruction, the blood distending the uterus and even the tubes. Such amenorrhea is purely mechanical and, of course, must be treated by the operation that may be appropriate. In this connection it might be well to utter a word of caution. If the condition has persisted a long time sepsis may follow an operation unless such be done under the strictest precautions as to cleanliness. With imperforate hymen, the operation itself is not of importance, but, nevertheless, the patient must be kept in bed until the organs have assumed their natural size and proportions.

There is no deflection of the uterus, either forward or backward, which can in itself cause an amenorrhea, and an attempt to straighten the canal, with the hope of relieving this condition, usually ends in disappointment.

Second. Another cause for amenorrhea lies in a lack of development of the uterus and ovaries. I wish, however, to lay especial emphasis upon the rarity of this condition, and the still greater rarity of anything pathological about it. It can only be said to be such when it is pronounced and persists far into adult life. We have been too ready to state to patients who have menstruated late or scantily that their trouble is due to a "lack of development." An examination of most cases of amenorrhea in young women will disclose a normal sized uterus, and, as far as the examination can determine, normal ovaries. The normal time for the beginning of menstruation is not by any means a definite one. Because menstruation does not begin at twelve or thirteen, it does not necessarily mean that the condition is a morbid one. Women who are otherwise healthy, but slow in development,

often reach the most perfect type of womanhood which we have. Among primitive people maturity takes place early, but these people do not attain the perfection, either physical or mental, which the Caucasian race does. A slow development and a late establishment of the menstrual function may sometimes be regarded as indicative of more perfect development later on.

Third. We now turn to the constitutional causes, and here it must be granted that our knowledge is still imperfect. The absence of menstruation depends upon many influences, some of which are imperfectly understood. It is not uncommon, for instance, that when the normal woman comes to change her mode of living, menstruation ceases for a time. Among nurses coming to the hospital to have their training, it is by no means rare to see an amenorrhea lasting many months. Women coming to the city from the country are oftentimes affected in a similar manner. Changes in climate may also bring this about. Most immigrants present a period in their first year of residence in America when there is a cessation of the menses. Such cannot be said to be distinctly abnormal, for they take place irrespective of nutritional disturbances. Certain occupations are often associated with amenorrhea. It occurs, for instance, in school teachers and others having mental labor indoors.

Fourth. By far the most common cause of amenorrhea is some disturbance in nutrition. Among the well-defined diseases are tuberculosis, typhoid fever, pneumonia—in fact, any of the acute or chronic diseases which cause ill nutrition. Addison's disease and acromegaly should perhaps be mentioned as being rare but positive causes of amenorrhea. So common is amenorrhea associated with tuberculosis that it has led to the popular idea that it is a cause of this disease. As medical men, of course, we

know this to be entirely unfounded, but can readily understand that because of their frequent association a patient may be disturbed in mind when she does not flow. In this connection it might be well to say that in the minds of the laity menstruation assumes an importance which we medical men do not give it. Women commonly believe themselves to be in good health as long as they menstruate regularly, speak with pride of the regularity of their menses as indicating their good health, and are apt to be troubled and alarmed if they cease, are scanty or irregular.

One of the commonest causes of amenorrhea is chlorosis. A large percent of young women during the years of adolescence have periods in which the regularity of the menstrual flow is disturbed or lacking for a more or less prolonged period of time. It is safe to say that most of the cases that come to us for treatment are due to this cause. Any anemia at any period of life is apt to be attended by amenorrhea.

Treatment.—From the above statements it may readily be seen that there is little to be said about the "treatment of amenorrhea," since this is seldom a condition which of itself is of any importance. When caused by obstruction, it should be relieved by appropriate operation as indicated above. Personally, I have no faith in any treatment, electrical or otherwise, which would mean to stimulate to normal growth undeveloped organs, so-called or real. When a woman presents herself with an amenorrhea our first duty should be to

find out the cause, and this is usually not a hard thing to do. Knowing as we do the ideas of the laity in regard to the matter, we should instruct the woman first of all as to the true relationship of affairs. This will oftentimes be of much help to her. It hardly seems necessary to emphasize the fact that we should always bear in mind the possibility of pregnancy whenever a woman with amenorrhea presents. A question of morals may arise here. That we so often fail to suspect the true condition of affairs indicates perhaps the confidence we have in womankind rather than our lack of diagnostic acumen. There is probably no one here who has not, for a time at least, been completely thrown off the track for this reason.

When once we have determined the cause, then will arise the question of treatment, and I would again reiterate what I have already said that no case of amenorrhea without a distinct local cause will require operation or local treatments. In fact, I believe much harm can be done in submitting a woman to measures which are not to the purpose. A chlorosis will require appropriate treatment, though it is hardly within the limits of this paper to speak at length upon it. In addition to fresh air, an abundance of food, iron or arsenic, I may say that it has sometimes served my purpose well to remove such girls from school for a year or more. A long rest in bed for a tired and anemic woman will sometimes result in much improvement, and, incidentally, to a re-establishment of the function.

Discussion of Three Preceding Papers.

Dr. Elliott urged a more comprehensive co-operation on the part of the general practitioner and the specialist in these cases of disordered menstruation.

Dr. J. H. Carstens, of Detroit, advocated the education of the laity concerning the seriousness of amenorrhea. In young women there is usu-

ally no occasion for worry. Fleishy women in later life often develop an amenorrhea which is difficult to cure. We can never say too much about this everlasting "change of life." Far too many patients go untreated until too late. Dysmenorrhea is a symptom very difficult to deal with. Carstens called attention to the stem pessary as a means of relieving dysmenorrhea and

amenorrhea. The uterus should be dilated and curetted if necessary and the stem pessary inserted to act as a foreign body. Perfectly healthy women, after many years of uterine inactivity, develop pain as a result of fibrous change of the uterine muscle. For these cases Carstens urges a trial of the stem pessary.

Dr. J. N. Bell, of Detroit, recalled the case of a woman 22 years old, in which he made a probable diagnosis of a small cyst of the ovary. She complained of menstrual pain. He dilated and curetted and inserted a stem pessary. One month later the patient had a severe flow. She returned after a year and abdominal section disclosed two small sausage-shaped tubes with atrophic ovaries.

Dr. W. F. Metcalf, of Detroit: Perhaps the most important thought brought out by the symposium was that in every case a thorough physical examination should be made. Often women are labeled neurasthenics and not properly examined. In his own practice he recently had a case in which no diagnosis could be made until examination under ether disclosed small nodules about the ends of the tubes, probably tuberculous. Syphilis may be a cause of uterine hemorrhage, the speaker reporting a case that improved under potassium iodide.

Dr. H. W. Longyear, of Detroit: The subject of dysmenorrhea in young girls is of great

importance especially to the general practitioner. Examinations and treatments when there is only a little pain are entirely wrong. An effective remedy is 4 grains of acetanilid and 1-30 grain of strychnine sulphate. Opiates are very rarely indicated. Longyear criticised Carstens' suggestion that any general practitioner can safely use the stem pessary.

Dr. J. E. Davis, of Detroit: A point in reference to the dietaries of these cases: Usually these patients select a large carbo-hydrate diet. The amount of fats and proteids should be increased.

Dr. L. J. Hirschman, of Detroit: More outdoor exercise should be insisted upon for patients with amenorrhea. It should be remembered that a certain number of cases of dysmenorrhea are due to referred pain from rectal disease.

Dr. R. R. Smith could not agree with Carstens in his advocacy of the stem pessary.

Dr. W. P. Manton said that he had had some experience with Dr. Carstens' stem pessary but was glad to say that he no longer used it.

Dr. R. Peterson: Like Drs. Longyear, Smith, and Manton, Peterson said he could not advocate the use of the stem pessary. The long continued wearing of a stem pessary is certainly liable to give rise to sepsis.

Disease of the Gastrointestinal Tract on the Borderland Between Surgery and Internal Medicine.—

John C. Hemmeter of Baltimore considers the early diagnosis of cancer of the intestine. It is hardly possible in the latent stage and one of the difficulties of the surgeon is the late stage of the disease at which the patient consults him. A serum diagnosis of such pathological conditions is most desirable. The author gives his experience in differentiating the different forms of tuberculosis peritonitis. There are three valuable aids in diagnosis. The first is intraperitoneal injection of some of the exudate in guinea pigs. The second is the injection of tuberculin. The last is the diazo reaction. This reaction occurring repeatedly indicates a tuberculous condition. The author believes that a cure of tuberculous peritonitis is possible aside from operative interference. His experience leads him to believe that at least as many patients recover under con-

servative medical treatment as under operation. Peptic ulcer of the duodenum and jejunum following gastroenterostomy for benign stomach diseases is a result of faulty conditions preceding and following operation. The acid chyme of the stomach should pass the orifices of the bile and pancreatic ducts, and the degree of stomach acidity should not exceed two parts to one thousand. Care must be taken to establish a proper course for the food such as nature intended it should take. Otherwise a duodenal ulcer may develop. A purely medical and dietetic treatment should be tried for a long time before operation takes place.—*Medical Record*.

The chief causative factors in peripleuritic abscesses are actinomycosis and typhoid osteomyelitis. A careful history as to a previous typhoid and a thorough microscopic examination of the pus should be secured.

HYGIENE IN PREGNANCY*

W. H. HAUGHEY, M. D.,
Battle Creek.

The process by which a human being is formed and a new soul is born into the world should be, and under normal conditions is, a physiologic one. Practically, however, in modern times, owing to our wide deviation from natural methods, and "the simple life," a very much larger percentage of pathologic cases than formerly is met with.

We cannot ask society, nor even those soon to become mothers, to return to the mode of life enjoyed by primitive man, nor to the environments and practices of our savage ancestors. We can, nevertheless, inject into our present day life those well known principles of hygiene which, if properly followed, would tend to promote health, happiness and longevity; to produce a sturdier and more vigorous race, and greatly improve the conditions of mankind.

Neither space nor time will permit me to dwell upon the evil effects of drug habits, the intemperate use of alcohol and tobacco, nor the vices of immorality and crime. I am consequently limited to a period of nine months occurring at intervals more or less frequent during the reproductive period in the lives of that portion of our women, who choose or consent to become mothers. To this circumscribed span of human life, then, I invite your attention. In it can probably be enumerated about one-fourth of our present adult population, and less than one-fourth of their lives comes within the period covered by the scope

of this paper. But what a period! It is the determining period for future generations, as to race, color, health, and enlightenment; for the reproduction of our kind; for the perpetuation of our institutions; and the population of the world.

Just what maternal influences, for good or bad, can be made on the offspring during pregnancy has not yet been determined. But that all determining influences be for good, it is necessary that health and environment be looked after with particular care during this time; that the surroundings be pleasant, freed from everything that causes worry, anxiety, excitement, or shock.

The extra demands made upon the nerve cells to supply the energy necessary to set in motion and keep active these forces and functions required to produce the material that goes into the growth of the new being, are so tremendous as to sometimes exhaust these cells, or to so weaken them as to seriously interfere with their action and the normal discharge of their functions. To this end can be traced much of the neuralgias, reflex vomiting and hysterical seizures of the early stages, eclampsia, and puerperal insanity in the later, or immediately following delivery and the lying-in period.

The confines of this paper, fifteen minutes, admit of so little discussion that I must leave, unsupported by argument, an opinion which, if once entered into, would require many pages for its completion. I cannot refrain, however, from

* Read before the Michigan State Medical Society at the Saginaw meeting, May 15, 16, 1907, and approved for publication by the Publication Committee.

a reference at this point, to puerperal insanity which develops so often in patients who up to the time of pregnancy or delivery have always enjoyed perfect health, both mentally and physically, with good family histories, and apparently strong nervous systems. Pregnancy takes place, goes on to term, a normal delivery is followed by normal conditions during the lying-in period. In about a month after delivery friends notice certain peculiar actions, which cause them to again seek medical advice, when a diagnosis of puerperal insanity is quickly and easily made. Is this insanity more apt to be caused by the newly established function of lactation, or by the long-continued demand for more nerve energy during the period of gestation so recently closed? Probably both have their influence, but the simple drying up of the milk, thus terminating the function of lactation, will not effect a cure. Months of rest and quiet, 'mid cheerful and pleasant surroundings, are necessary, a time sufficiently long to allow the overworked cells to recuperate and become, as it were, recharged, must elapse in each individual case before even an approximate return to normal conditions can be secured.

Much time and thought have been given by gynecologists, and valuable work has been done by them in an effort to ascertain what and how much they can do to prevent insanity in women; an equal or greater amount of attention to the same subject on the part of the family physician would yield probably greater results, and the two working together would surely accomplish far more than either unaided by the other can possibly hope to accomplish. I believe the foundation for this trouble is laid long before the gynecologist is called in, viz., during the period of gestation; and that the physician in charge, by keeping ever in mind the danger, especially in primipara, can do much to

protect the wonderful and delicate brain mechanism from overstrain and exhaustion during this, its first period of greatest taxation. Wholesome food, out-of-door exercise, pleasant surroundings, freedom from anxious cares, and the harrowing tales of others' sufferings and woes told by well-meaning but ill-advised friends. In a word, exemption from everything that causes an unnecessary consumption of nerve energy, will do much to forestall this dreadful calamity.

That pregnancy causes marked destructive processes to take place in the teeth has long been a recognized fact. Cavities frequently occur and previously existing ones rapidly become larger. In these cavities are found lodging places for particles of food, debris, and germs, and as this mixture is warm and moist, all the conditions for rapid bacterial development are supplied, thus the decay is hastened and extended until nerves are exposed and intense toothache or facial neuralgia is the result. It is a simple and by no means painful operation for a dentist to clean out such cavities and put in good cement fillings, thus supplying firm aseptic dressings for the exposed nerve and checking the bacterial growth and subsequent decay, relieving the ache and the neuralgia in most cases more permanently and less objectionably than can be done by hypodermics of morphine. When an aching tooth cannot be filled with cement, I usually advise its extraction. The pain and shock is soon over and I think is less to be feared than the long continued, nerve-racking torture of toothache or neuralgia, or even the morphine necessary to quiet either for several months of time. Of course, care and judgment must be used when this is done. In well-selected cases that can go calmly about it with little or no excitement I have never seen any bad results from it. A bungling or nervous

dentist should *not* be employed.

Of all the ailments of pregnancy there are none more common or more distressing than vomiting. It is present in nearly every case, is a most annoying condition producing great suffering, and even death has more than once followed in its wake. Here again hygiene can do much in the way of relief. The diet should be carefully watched and intelligently managed; too many restrictions need not be made, but no place should be given to the gratification of the longing for indigestible substances, nor to those of difficult digestion. Ten minutes' intelligent reasoning with the patient will usually secure her co-operation, after which no further trouble in regulating the diet will be found.

Stomach lavage in selected cases gives much relief by cleaning the free mucus and leaving the stomach walls bathed in plain water instead of the fermenting mucoid solution present before lavage. When the stomach tube cannot be used the patient can, immediately after a paroxysm or, better, during it, drink a large glassful of warm water slightly flavored with some agreeable extract or essence, such as peppermint, lemon, pineapple or wintergreen, just sufficient to give it an agreeable taste to the patient. This will probably be at once returned, but the lavage is secured and rest usually follows.

Intestinal fermentation is combatted by keeping the bowels reasonably open and the rectum well cleansed out, thus avoiding much autoinfection from this source. Mild laxatives when necessary, plain or saline enemata, together with a proper diet, and sufficient fresh air and exercise, are the means to be used in most cases, and will usually be found effectual.

In the urine we find an index to many important changes, and it should be studied with care and attention, not only for the presence of albumen, with the

evil portent of which all are familiar, but the quantity of urea should be ascertained, and especially frequently during the last few weeks. The quantity of chlorides and sulphates should occasionally be determined and microscopical work should be done. Often the urine is found to be infected, and will then most always yield a small amount of albumen, but it does not come from the kidneys, neither is it an indication or harbinger of convulsions nor eclampsia, but shows some mild cystitis, and should be treated by systemic medication, bladder irrigations, or both.

The Cervix: Old lacerations, gonorrheal or other discharges, should receive prompt attention. In the very early stages lacerations may be repaired. Though I do not recommend this to others, I have done it myself as late as the third month with excellent results, and no unfavorable symptoms followed. Ulcerations should be cleansed, treated with iodine and healed. Gonorrhea should receive its proper attention. In fact, place the patient in as nearly normal condition as possible and keep her there.

I am not a believer in massage to nipples or breasts with the idea of increasing their size and function, nor of stimulating the flow of milk; neither do I favor too much dieting for this purpose, nor for the purpose of effecting an easy delivery. I prefer to take care of the general condition of the patient, and trust nature to do her part.

Happy indeed is that young mother who passes through her first pregnancy and brings forth a healthy child with no serious effects on herself or her offspring. Correspondingly unhappy is she who is able to trace to some act or neglect of her own a physical or mental defect in her child. A woman pregnant for the first time is the target against which is launched all the advice, caution, or censure that can be conjured up in the fer-

tile brains of all the women of her acquaintance who, having born children, believe themselves by means of this experience competent to advise or warn. And many young women would be better off in the wilds of the unbroken forest, whose denizens she might indeed copy, but whose advice and warnings she could not understand, than surrounded by these well-meaning but misguided, though terribly enthusiastic, friends.

As professional men and women it is

our duty to caution near relatives and those closely associated with the patient to protect her as much as possible from her friends. She should have the early and frequent advice of a conservative physician who has been made acquainted with all the conditions surrounding her past, including family peculiarities, personal history and habits, and constitutional traits and characteristics. Then by closely watching the patient and following the principles of hygiene suggested above, a successful and happy termination will be the rule.

If a patient complains of sharp pain in the big toe, examine the urine for albumin or sugar in order to exclude a diabetic or nephritic condition.

Always examine a child suffering from chorea for the presence of adenoids. The removal of the growths in the back of the pharynx may cure a mild case.

Increasing deafness and blindness should suggest an intracranial tumor, especially if facial palsy be present. The commonest situation is in the cerebello-pontine angle.

Persistent hemorrhage after the extraction of a tooth is often relieved by the application of trichloroacetic acid. If the hemorrhage does not cease after its application, tamponade of the cavity is the next best available means of stopping the flow of blood.

On Flatulence and its Treatment.—Max Einhorn of New York says that flatulence may be associated with the stomach alone, or with the intestine. When primary it is not caused by fermentation, but by swallowing of air. The sphincter muscles of the digestive canal are principally affected. It may exist for a long time without serious consequences. In acute and chronic gastric catarrh there is a real increase in the amount of gas in the stomach and a lessened absorption

of it. Flatulence can be lessened by distracting the attention of the patient from his own sensations. When it is secondary it results from cardiac, circulatory, or respiratory diseases, and the relief by belching is rather imaginary than real. In primary flatulence, treatment consists in the effort not to belch, with a simple diet and avoidance of beverages and foods that produce gas.—*Medical Record*, September 14, 1907.

"If a man can write a better book, preach a better sermon, or make a better mouse-trap than his neighbor, though he build his house in the woods, the world will make a beaten path to his door."—*Ralph Waldo Emerson*.

A moderate prolapse of the rectum with hemorrhoids may possibly be relieved by the treatment of the hemorrhoids with clamp and cautery.

A sinus leading high up in the axilla and discharging a moderately clear fluid may communicate with the shoulder joint or pleura.

A high temperature just after or during an abortion is evidence of intrauterine manipulation, especially if the discharge from the uterus is fetid.

A fecal fistula may be made to heal more quickly by the application of the actual cautery.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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JANUARY

Editorial

The Archives of Internal Medicine.—

The announcement has been made of a new journal to appear under the above title. It is to be devoted to internal medicine, will contain no abstracts or editorials and will carry no advertisements. It will appear monthly, making two volumes a year. The subscription price is \$4.00, or to members of the American Medical Association or subscribers to the Journal of the Association it will be \$3.00.

Such an announcement is certain to arouse misgivings. The addition of a new journal to the already extensive list of medical periodicals must be viewed with suspicion and criticism, and yet such a thing is merely one of the signs of the times. Medical periodicals are rapidly increasing, not only those of a general tendency, but also those devoted to special subjects. The fact depends upon the character of contemporary medical activity. An enormous amount of new material is constantly being written. This is not adapted to publication in books; nothing but periodicals of a serious kind can fill the need of conveying the written article to the reader. However, the multiplication of solid medical journals has a serious economic importance and the latter must be squarely faced if the existence of such journals is to continue and their pur-

pose to succeed. But few physicians can subscribe for the many journals they should read. *Noblesse oblige*, and the well-to-do physician can repay his debt to the profession by subscribing liberally. For others the solution must be in the medical library, which must exist in every town large enough to support progressive physicians. But it may be said that even if libraries are greatly multiplied the circulation of journals would be small and their publication unprofitable. It is precisely in this respect that The Archives of Internal Medicine occupies an important vantage point. It is published by a large and strong organization, the American Medical Association, which owns its own printing plant and has all the other animate and inanimate means for the production of printed matter. The publication is not intended to be a source of financial profit, and the money received from subscribers will be devoted to keeping up and improving the workmanship of the journal.

At first glance it may be thought that the journals now in existence provide all the room necessary for medical literature. On the other hand, the advance in medical education and medical study in America has been accompanied with a great increase in the number of those qualified to make contributions to medical knowledge; while at the same time the field of investigation is enormously enlarged. The field to be covered by The Archives of Internal Medicine is different from that of any journal now printed in the United States. "The American Journal of the Medical Sciences," one of the best medical periodicals ever published, covers the whole realm of medicine. The "Journal of Experimental Medicine," the "Journal of Medical Research" and the "Journal of Infectious Diseases" offer facilities for purely technical papers in the more scientific part of medicine. The Archives

of Internal Medicine, as its name signifies, will be open to articles that appeal more strongly to the practical side, though it is to be hoped that its articles will never be free from sound scientific foundation. Many excellent articles have failed of their purpose because they were published in journals where they would not be looked for or cut up into parts and issued in journals that could not afford space for a long article. The Archives will serve to show that internal medicine is just as important a field of investigation as any other. The remarkable discoveries of the last quarter century have over-emphasized the importance of experimental investigations. Men with proper training can still make clinical observations quite as important as those made before the experimental days by Morgagni, Corvisart, Bright, Addison, Skoda and so many others. The whole field of functional alteration in sick people is open to explorers. The real value of pharmacology in the sick man is still to be worked up in detail. No amount of official or institutional research will absolve the clinician from the duty of confirming discoveries of clinical importance. More than ever before the clinician must remain master in his own house, and it is to be hoped that The Archives of Internal Medicine will assist him to do this with accuracy and therefore with success.

The absence of abstracts and editorials will strike many readers as a novel departure. On consideration, however, there will seem to be no serious loss from this peculiarity. Selected abstracts will doubtless continue to appear in many periodicals. The abstracting of all the articles in a series of journals, so successfully carried out by the Journal of the American Medical Association, can be kept up better by that Journal, it would seem, than by any other. On the other hand, we are promised

that critical reviews of articles on important subjects will from time to time appear in The Archives. Those who have occasion to go over all the literature of a given subject for a number of years could often make such reviews while writing original articles and could have the reviews published separately to the great advantage of their readers and as a great improvement over the bibliographic lists to which many writers are now limited. Those who are familiar with the comprehensive reviews in the *Centralblatt fuer die Grenzgebiete der Medizin und Chirurgie* must have deplored the absence of similar articles in English literature.

From the above one may see the many possibilities of a new journal. The appearance and reception of The Archives of Internal Medicine must therefore be followed with interest by every one who is concerned with the literature of medicine.



A comparatively scientific medical nomenclature is now taught in the best medical schools of the country,—as scientific as the profession has allowed it to become. It is of great advantage to have diseases, symptoms, etc., called by appropriate names, and it is conducive to the universality of medical terminology if Latin names are used. In this respect the modern student is well taught, but his instructors sometimes forget to identify the scientific with the popular or old-fashioned names, and when the student begins his real practice he is confronted by terms that he is likely never to have heard. The laity are quite tenacious of such terms as “brain fever,” “congestive chill,” “softening of the brain,” “slow fever,” “inflammation of the bowels,” and not a few physicians are equally tenacious. One suspects that these phrases are used as a cloak for ignorance in some

instances; for example, how intelligent it sounds to speak of "inflammation of the bowels," yet what a multitude of diagnoses may be enshrouded in its ample folds. And how many can swear to the identity of a "congestive chill?" "Slow fever" is the dictum of the physician who is unable or too lazy to diagnose between typhoid, tuberculosis, or sepsis.

Other names, while more connotative, and closely defined, yet often escape the average student, and he is in the realm of speculation when he hears, as he may in different parts, of "prison fever," "break-bone fever," "black death," "icing liver," "wooden tongue," "trembles," etc. He may well wonder at such hack phrases, and think scornfully of the users; but he should remember that exactly similar phrases have been dignified into such common usage that they have long since lost their flavor of vernacular, for example, "consumption," "ague-cake," "nutmeg-liver," "whooping cough," "small-pox," and many others.

It would be an interesting study to collect and classify such terms and seek their origin. Some of them are so fitting that they will, perhaps, never be relinquished; others are so ingrained in us that we cease to think of their inappropriateness; but the majority are unnecessary, unscientific, misnomers, and it would greatly help a good cause if physicians would forsake their use. Efforts in this direction have already taught the public largely that "lockjaw" is tetanus, that "putrid sore throat" is diphtheria, that "lung fever" is pneumonia, that "hunch-back," "hip disease," "scrofula" and "consumption" are tuberculous diseases. That these things are being learned is due to the latter-day belief in sharing knowledge with the laity, instead of mystifying them by silence and secrecy.

In the meantime, undesirable as these

popular, old-fashioned, or colloquial names may be, it is wise to retain at least a knowledge of their definition, so that we shall not seem ignorant when asked about "gastric fever," "water on the brain," "canker sore," "English sweats," or "black death."



How Some Nostrums are Exploited.—

Ever since the Council of Pharmacy has been passing upon the virtues of many of our "new and non-official" remedies, the vendors of patented, synthetic, and specially prepared products have awaited with much anxiety the seal of approbation for their pet preparations. They have been loathe to advertise in legitimate medical journals until "accepted"; they have cautiously avoided exploitation in lay periodicals; but they have been none the less active in placing their products before the profession by other methods of advertising.

The very latest that has come to our attention is a scheme that, with its attractive and simple plan, rivals the astuteness of the cross-roads barker. A large eastern importing firm is eager to increase its sale of remedies—a very laudable ambition. The agent tells you that the laity "cry for" these products, but the firm abhors the suggestions of public advertisement to increase the sale. They have spent fortunes annually in honest medical advertising and could continue to with profit. But why should they give these sums of money yearly to medical periodicals when the profession might as well divide the plum? Their plan is this: The company has placed on sale a large block of preferred stock. (How enticing this word stock is to the struggling practitioner!) Only a limited number of shares is procurable by each physician at par value. He pays 10 per cent down on the subscription and 10 per cent monthly until all is paid for. Mean-

while he is assured of a two per cent quarterly dividend with an annual common dividend amounting to 10 per cent.

What are his duties as a subscriber and shareholder? None, absolutely none!

He is assured that it is perfectly ethical—no question about it. The names of prominent physicians are mentioned and his skepticism vanishes as his eagerness to enjoy the income on a safe investment grows.

At this moment (if the agent does not press his scheme too quickly) he is inclined to ask himself a few questions. Who will buy the products of this concern? Will he prescribe them for his patients if he never has before, or in preference to remedies that he is sure of? Has he the right to become the agent or the advertising medium of a business corporation in his practice of medicine? Would his action pass a "council of ethics?"

At that moment too, he wonders if these prominent physicians really bought stock in such a concern? If they did, were their motives ethical?

There can be but one standpoint for a physician to take on such a proposition: to brand it as absolutely unprofessional. The man who trifles with the welfare of his patient for the purpose of selling the products of a company in which his money is invested, is on a lower plane than the practitioner who takes a rake-off from the prescriptions he sends to his druggist. He is a masquerading buzzard, and there is no scorn nor condemnation severe enough to put him on the rack with those charlatans who make their livelihood on secret nostrums.

It is hoped that none of the Michigan profession has been seduced by this or other similar schemes. We regret to say that there are some medical men of recognized standing in our societies today who hold shares in pharmaceu-

tical companies and who demand in their prescriptions the dispensing of the drugs of their own form "in original bottle with label removed," et cetera. Fortunately the special products that they prescribe are often inert or valueless and do no harm to the confiding patient. Their methods will doubtless lead them to grief in the end and should they at some time receive their deserved opprobrium, surely ethical practitioners will have no sympathy to waste upon them.

Obituary

DR. SIDNEY I. SMALL.

1842-1907.

If anyone familiar with the affairs and the personnel of the Michigan State Medical Society were asked to enumerate those of its membership who have deserved and enjoyed the esteem of their colleagues, universally, the name of Dr. Sidney I. Small would surely not fail of early mention. It is scarcely possible for one who has known him intimately to conceive of his giving abiding place to any petty failings. He brought to every act of life calm judgment, benevolence, sincerity, and old-fashioned integrity. His mental poise was excellent: he had in marked degree the judicial temperament and was invariably actuated by lofty motives.

The one who is privileged to write these laudatory words has known him for nearly thirty years, and as acquaintance ripened it was more and more highly prized. Eventually there developed an abiding affection which has been steadily augmented with longer acquaintance. I have met Dr. Small under trying conditions. It has been my good fortune to receive from him and to give to



Sidney T. Small, M. D.
1842 - 1907

him such as was within the power of either. At the bedside he was a safe, conscientious and sympathetic adviser. He had an eye single to the needs of his patients and brought to bear in difficult cases much careful thought on his own part and the results of the experience of others. He was pre-eminently unselfish and fair and spared no amount of personal sacrifice to a worthy end. Socially his manners were delightful. There was a fund of drollery and that fine response to the amusing episodes of life highly suggestive of a heartful of kindness and of abounding good nature.

He brought to the Council of the State Medical Society the same caution, the same considerateness, the same frankness and the same self-effacing fairness that governed him in his relations with his patients and with his professional brethren. He measured every important act by the moral standard. He gave, without stint, of his time to the affairs of the society during the early and trying period of reorganization. It is doubtful if one could have anywhere been found better fitted to unite elements at first more or less dissident and inharmonious. His plain, fatherly, conciliatory ways, and the fact that he was so strongly believed in by members of his profession, permitted the speedy progress of the societies in the Eighth Councilor District to an influential position in the reorganized association. This position has been maintained. The early seed was discreetly sown. For the harmonious and comfortable relation of members of the profession in the Saginaw Valley and nearby counties to each other, and the prosperity of these societies, much is owing to our lamented friend.

Dr. Small was the son of the late Alexander and Elizabeth Blaisdell Small, and was born in Carmel, Maine, April 24, 1842. He received his preliminary education in the public schools of Carmel and the Hampton Academy. He

was graduated from the Maine Medical College in 1872 and from the College of Physicians and Surgeons, New York, in 1873. For a year he practiced medicine in Maine. In 1874 he moved to Saginaw, where, in the language of a eulogist, he "built with the passing years an enviable reputation and practice." For twenty-five years he was connected with St. Mary's Hospital, and was a member of the staff of the Saginaw General Hospital. He served on the Council of the Michigan State Medical Society from 1902 to 1907.

He was a member of the Masonic order, was interested in civic affairs but never sought public office. "He was an unobtrusive citizen doing the work that lay in his path of duty with a native modesty that sought no glare." "He was an energetic worker and had a profound love for good literature."

He was married in 1878 to Miss Meriba Ruggles, of Carmel, Maine. Two children were born of this union, a daughter and a son, whose lives have given evidence of the value of the best parental influences. In his home life, Dr. Small was delightful, an ideal husband and father. He was self-sacrificing and kind and was revered by the members of a charming family circle.

Death came with great suddenness as the result of an apoplectic seizure, Saturday evening, November 23. He had been in failing health for two years before, but resolutely carried on his work up to the time of the final summons.

His fervent hand-clasp, his radiant smile, his cordial greeting will long be remembered by his professional brethren.

The record of his life is a beacon light. Though "the golden bowl be broken," its contents have been poured out abundantly and graciously upon others, leaving with them the fragrant memory of a life beautiful in its simplicity, emulating that of One who "went about doing good."

C. B. B.

JABEZ PERKINS, M.D.

1820-1907.

Jabez Perkins was born in Defiance, Ohio, October 26, 1820. At the age of 18, he entered Wesleyan University, and after two years study there, he began the study of medicine and entered the Western Reserve University, Cleveland, graduating in 1849. In 1859, he took a post-graduate course in the College of Physicians and Surgeons, New York. He settled in Owosso in 1860. Two years later he entered the service of his country, and had charge of a hospital at Nashville; later he received a commission with the Tenth Kentucky Volunteer Infantry; later still, he was Chief Surgeon of the Twentieth Army Corps of the Army of the Cumberland.

On October 6, 1865, he resigned and was brevetted Lieutenant Colonel for gallant and meritorious services to his Country. After the war he took another post-graduate course at the College of Physicians and Surgeons, and then returned to Owosso, which has been his home and the field of his labors till the day of his death, which occurred Wednesday morning, November 6, 1907.

Dr. Perkins was a constant student, an able diagnostician, and a careful, conscientious practitioner,—a physician of rare good judgment. He was a doctor of the "Weelum McClure" type, ministering with his best skill to the rich and poor alike, going night and day, through wind and storm, without thought of self or compensation. He was kind, sympathetic and charitable. "He had a tear of pity and a hand open as day for meeting charity."

He believed in medical organization for its social and educational influences, and was a member of the County, State and American Medical Societies.

The County Society attended his funeral in a body and gently laid him

down in "God's Acre," "breathing a benison o'er the sleeping dust."

The following resolutions were passed:

Whereas, death has removed from our midst, in the fullness of years, our beloved friend and associate, Dr. Jabez Perkins; and, *whereas*, he was a wise counsellor and valued advisor to the members of this Society for many years; therefore, be it

Resolved, By the Shiawassee County Medical Society, that in this memorial and resolutions we express our loss and sorrow, at the severance of those ties of many years' duration, and that we express to the widow our deepest sympathy in her bereavement.

Resolved, That this memorial and resolution be spread upon the record, a copy be sent to the JOURNAL for publication and a copy be forwarded to the widow of our deceased member.

C. McCORMICK,
A. L. ARNOLD,
R. C. MAHANEY,
Committee.

Book Notices

Obstetrics:—A Text Book for Students and Practitioners.—By J. Whitridge Williams, Professor of Obstetrics in Johns Hopkins University. Second Edition. Octavo: 950 pages, 166 illustrations and 16 plates; cloth, \$5.00. New York; D. Appleton & Co.; 1907.

When the first edition of Williams' Obstetrics appeared, four years ago, it was instantly accepted as one of the three best American treatises on the subject. The author's well known scientific ability, coupled with his excellent literary attainments, produced a book which has no superior. An edition of 17,500 was printed and sold. As it became exhausted, a second edition was prepared and this second edition has been brought up to date by a complete recast of the chapters on the "Development of the Ovum" and the "Toxemias of Pregnancy." New matter relative to the "Meta-

bolism of Normal Pregnancy,' "Vaginal Cesarean Section," "Pubiotomy" and "Contractions of the Pelvis Outlet" have been added.

The arrangement of the matter in each chapter is logical. The historical references are always interesting and to the point. While the views of others are given full weight, one is never at a loss to know what the author thinks of a theoretical question or what he does under certain conditions. It is the individuality about the book which gives it its greatest value.

The illustrations are all original. They are well chosen and splendidly executed.

The book is to be unreservedly recommended.

Heart Disease and Blood Pressure. By Louis F. Bishop, A. M., M. D. Second Edition; pp. 120. Cloth, \$1.00. New York; E. B. Treat & Co.; 1907.

With the avowed intention of expounding a pet theory rather than adding some scientific facts or data to our knowledge of blood pressure changes, Doctor Bishop has published his second edition on "Heart Disease and Blood Pressure."

Under this title the unsuspecting physician looks for a book that will enlighten him on the important subject of vascular tension, but how the author can pretend to give or the reader expect to get an intelligent exposition of "Heart Disease and Blood Pressure" in 113 pages baffles comprehension.

The author presupposes too much when he states that the impression gained "by one's early study of physiology is erroneous." Doubtless some physicians have incorrect ideas (or maybe none at all) on the physiology of the circulation: to them any new idea adds to the confusion, especially the dominant one in this book. The many careful readers of the profession, however, will disagree with the conception the author has of Harvey's work on the circulation, as they will also refuse to accept entirely the analogue of the tubular boiler to the arterial system.

In Chapter II., page 24, we are met with a statement that at once elevates one's own systolic pressure. The writer says: "The symptoms are practically the same for all forms of valvular lesions, although different in degree. Indeed, it is more often an academic than a practical question to decide which valves are at fault." Does a clinical professor in Diseases of the Heart imply that he teaches his students to treat incompen-

sated mitral insufficiency and aortic stenosis in the same manner?

In Chapter III., page 29, the author recommends the use of sodium iodid during the stage of cardiac compensation to prevent "degeneration of the hypertrophied heart." On page 43, he says that alcohol in moderation may be employed with therapeutic benefit in patients whose kidneys are damaged by disease. On page 57 we read: "There is a class of obscure symptoms of circulatory disorder which consists of pain in various parts of the body. How much of this is purely circulatory, and how much of it belongs to the gouty, rheumatic, and nutritional disorders that are common in the same class of patients, is often hard to determine." When publishers accept such manuscript, when authors foist such ideas on the profession, and when practitioners are enticed into reading these and similar statements, we often wonder if there should not be a censor of medical publications.

Towards the end of the book Doctor Bishop quotes himself, as well as the opinion different writers have of his work in a satisfying fashion.

There is nothing new in this well published little book. It is useless and even harmful to the doctor who wants to gain an intelligent idea on this subject. It is worthless to any physician doing advanced work on blood pressure.

A Manual of Hygiene and Sanitation. By Seneca Egbert, M. D. Professor of Hygiene in the Medico-Chirurgical College, Philadelphia. New (fourth) Edition, thoroughly revised. 12 mo., 498 pages, with 93 illustrations. Cloth, \$2.25 net. Lea Brothers & Co., Philadelphia and New York; 1907.

This work of Egbert's admirably fills the place of a moderate sized book on hygiene. This science has developed so remarkably in the last decade that its literature has now become very large, but Egbert has revised his work without adding greatly to its original size. He has confined the subjects treated to those most generally useful to the medical man, and the result is that the volume is especially readable. There is not a dull page in it. Moreover there is contained in it much information which every practitioner ought to have, though it is safe to say that few are conversant with many of the points brought out, as for example, in the chapters on "Ventilation and Heating" and "School Hygiene." These chapters and those on "Water," "Food," and "Personal Hygiene" are particularly valuable.

No one can read the book without gaining many valuable hints. The text is elucidated by good illustrations.

Handbook of Cutaneous Therapeutics. By W. A. Hardaway, A. M., M. D., Professor of Diseases of the Skin and Syphilis in Washington University, St. Louis, Mo., and Joseph Grindon, M. D., Ph. B., Professor of Clinical Dermatology and Syphilis in Washington University, St. Louis, Mo., 12 mo., 606 pages. Cloth, \$2.75 net. Philadelphia, Lea Brothers & Co.; 1907.

This handbook consisting of 606 pages, is divided into two parts: The Treatment of Diseases of the Skin, and General Treatment and Methods.

Part 1 consists of brief, concise, descriptions of the various diseases and their medical treatment, and is the result of Dr. Hardaway's long experience. He has interspersed carefully selected formulae.

Part 2, written by Dr. Grindon, takes up physical and mechanical treatment of these diseases, including Radiotherapy, Faradism, Galvanism, High-Frequency, and Minor Surgery.

While each has written on his own topics, in the two parts, their co-operation on the whole work, gives a completeness which is most useful and instructive.

The importance of obtaining carefully prepared local applications, especially ointments, has been fully realized by the authors, and they have contributed some useful notes on the preparation of ointments, etc., from an experienced professor of pharmacy, J. M. Good.

The work is intended to supply to the general physician, a ready aid in the diagnoses and therapeutics of the diseases of the skin.

A Manual of the Practice of Medicine. By A. A. Stevens, A. M., M. D., Professor of Therapeutics and Clinical Medicine in the Woman's Medical College of Pennsylvania. Eighth Edition, Revised. 12 mo. of 558 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Flexible leather, \$2.50 net.

The eighth edition of this popular manual seems to have been carefully revised and brought up to date. A book of this kind can hardly be of great use to any one but the student cramming for examinations, but the demand for similar compends shows that they have a legitimate place and of its kind the volume before us is certainly one of the best. The field is very thoroughly covered, and the statements are on the whole clear and accurate. The sections on gen-

eral symptomatology and methods of examination are unusually good for such a manual. In addition to the subjects usually treated in books on practice, there is a very complete chapter on the diseases of the skin and its appendages.

The Physician's Visiting List. For 25 patients per week, \$1.00; 50 patients, \$1.50, or in 2 vols., \$2.00. Philadelphia, P. Blakiston's Son & Co.; 1908.

This well known visiting list has appeared for the fifty-seventh time. It is well printed and bound and the arrangement is most convenient.

County Society News

Second District.

The counties comprising the Second Councilor District (Hillsdale, Ingham and Jackson) met with the Jackson Society on December 5, 1907.

Dr. M. C. Strong, retiring president, was chosen temporary chairman, and Dr. H. H. Frazier, of Hillsdale, temporary secretary. A motion that the chairman appoint a committee on permanent organization was seconded and carried. The committee appointed was Dr. B. F. Green, Hillsdale; Dr. C. G. Parnall, Jackson; Dr. F. L. Seger, Leslie.

The following was the program for the afternoon: Address of Welcome, Dr. A. E. Bulson, Councilor Second District; "Preventive Medicine. Is It a Fact, a Fad or a Fancy?" Dr. F. W. Shumway, Secretary State Board of Health; "Loss of Originality in Prescription Writing," Dr. Bion Whelan, Hillsdale; "Opsonins," Dr. W. H. Hutchins, Detroit; "Spina-Bifida," with Special Reference to Treatment," Dr. Miles F. Porter, Fort Wayne, Ind.; "Medical Record Keeping," Dr. Samuel Osborne, Lansing; "Renal Tuberculosis, a Surgical Disease," Dr. F. W. Robbins, Detroit, Mich.; "The More Recent Pathology of Gonorrhea," demonstration by lantern slides, Dr. A. S. Warthin, University of Michigan.

All the papers were given, except that on medical record keeping, Dr. Osborne not being present. The committee on permanent organization reported and the Second Councilor District Medical Society was organized, a constitution adopted, and the following officers elected: President, Dr.

N. H. Williams, Jackson; vice-president, Dr. B. F. Green, Hillsdale; secretary and treasurer, Dr. Samuel Osborn, Lansing.

In the evening Jackson County Medical Society's annual banquet was held at the Otsego. Sixty were present. At the tables as guests of the society, there were present Dr. Herman Osterlander, of Kalamazoo; President of the State Society; Dr. Miles F. Porter, Fort Wayne, Ind.; Dr. A. S. Warthin, University of Michigan; Dr. F. W. Robbins, Detroit.

R. GRACE HENDRICK, *Sec'y.*

Calhoun.

The thirty-first annual meeting of the Calhoun County Medical Society was held at the Y. M. C. A. rooms in Battle Creek Tuesday, December 3, 1907.

More than one hundred members and neighboring physicians were present and the meeting was adjudged the best of years. The year just finished has been the most profitable in the history of the society. The membership has advanced from seventy-eight to eighty-one, notwithstanding the loss of seven by resignation and removal.

A post graduate branch of the society has been formed as the Battle Creek Medical Club, to which only society members are eligible, with a membership roll of about forty. Weekly meetings are held and one paper a week read and thoroughly discussed. From twenty-five to thirty attend regularly.

In the County Society work a marked increase in enthusiasm has been apparent all the year, both in the attendance and discussion of papers.

At the annual meeting the full program was rendered, the only drawback being the shortness of time owing to the delay of starting the meeting.

The first paper was by Dr. Frank X. Walker, of Chicago, "Metabolic Intoxication in Infancy." It was full of new ideas and suggestions as to the treatment of a more or less greatly neglected and overlooked condition in children. It was ably delivered, clearly illustrated and well discussed.

Dr. Bayard Holmes, also of Chicago, followed with a paper of an allied subject, "Symptomatic Toxemia from Local Infection." It was full of the results of practical work upon the part of Babcock and Holmes and brought forth some

valuable and startling results. Like the previous paper it provoked a vigorous discussion.

The scientific part of the program was ably closed by Dr. Albert P. Ohlmacher, of Detroit, who outlined the results of his extensive work with the opsonins in a paper entitled "The Theory of Opsonins as Applied in Practice." It took up in a broad and practical manner the treatment and analysis of a great variety of diseases according to the theory advanced by Wright.

A committee of three, of which Dr. Geo. C. Hafford, of Albion, is chairman, was appointed to confer with the supervisors in the hope of arranging some plan whereby the indigent and county poor may be cared for and the fees, necessarily of small amounts be paid into the society treasury as a part of its maintenance and so eventually obviate the necessity of a per capita tax.

The annual election of officers resulted in the choice of Dr. W. H. Riley, of Battle Creek, for president; Dr. Geo. B. Gesner, of Marshall, for vice-president; Dr. A. S. Kimball, of Battle Creek, for secretary-treasurer; Dr. R. M. Gubbins, of Ceresco, and Dr. S. K. Knight, of Marshall, for delegates; and Dr. R. D. Sleight, of Battle Creek, and Dr. J. L. Ramsdell, of Albion, alternates.

The meeting adjourned to the Post Tavern to the banquet at which were seated one hundred and twenty guests.

The next meeting will be held March 3, 1908, in Albion.

A. S. KIMBALL, *Sec'y.*

Jackson.

The Jackson County Medical Society held its annual meeting December 5, 1907, before the meeting of the Second Councilor District.

The business meeting at ten a. m. was well attended, and the various annual reports and committee reports showed thorough work along lines pertaining to the public health and in post graduate work.

Officers for the coming year were elected as follows: President, Dr. F. W. Rogers, Jackson; vice-president, Dr. G. H. Townsend, Tompkins; secretary, Dr. R. Grace Hendrick, Jackson; treasurer, Dr. A. J. Roberts, Jackson; delegate, Dr. M. C. Strong, Jackson; alternate delegate, Dr. J. C. Kugler, Jackson.

R. GRACE HENDRICK, *Sec'y.*

Kent.

The Kent County Medical Society held its annual meeting in the Board of Trade rooms in Grand Rapids, Dec. 11th, 1907.

Reports from all the retiring officers were very encouraging and indicated that the society has closed the most successful year of its existence. Thirty-two scientific papers were read and 48 clinical cases exhibited. Socially we have had a banquet, a smoker and a picnic. The average attendance at our meetings was 26—although there were occasions when the attendance was between 60 and 70.

The following officers were elected for the ensuing year: President, Dr. G. L. McBride, Grand Rapids; vice-president, Dr. W. H. Kassabian, Coopersville; secretary, Dr. F. C. Warnshuis, Grand Rapids; treasurer, Dr. J. J. Rooks, Grand Rapids; delegates, Drs. R. W. Luce and L. E. Chappelle; alternates, Drs. J. E. Meengs and Ralph Apted.

The newly elected officers enter upon their duties with the determination of making this coming year more successful than the last.

F. C. WARNSHUIS, *Sec'y.*

Lenawee.

The third annual meeting and banquet of the Lenawee County Medical Society was held in Foresters' hall, Adrian, December 10, 1907. Over sixty members were present from all over the county, and there were several visitors from other places, who expressed themselves as highly pleased with the excellent work of the society.

Promptly at 3 o'clock in the afternoon the members gathered at Foresters' hall, where the annual election of officers was held and the reports for the past year read and approved. President Dr. D. L. Treat was absent, and Vice-President Dr. O. N. Rice occupied the chair. The following were elected to fill the offices during the year of 1908: President, Dr. O. N. Rice, of Tipton; vice-president, Dr. L. G. North, of Tecumseh; secretary-treasurer, Dr. J. C. Johnson, of Adrian; delegate to state meeting, Dr. R. M. Eccles, of Blissfield; alternate, Dr. I. L. Spaulding.

Dr. Johnson, the present secretary and treasurer, read the reports of these officers for the season

just completed. They showed that both financially and otherwise the society is in the best of condition. The membership has been raised far above the half century mark.

At the outset the meetings of the society were held every three months, then a change was made, and they were held every two months. By action of Tuesday's meeting it was decided to convene once every four weeks.

Dr. John Kellar, of Toledo, was present and read a very interesting paper.

This ended the session of the afternoon and the meeting was adjourned to convene at the hall for the banquet at 6 o'clock. The dinner, at which 62 members and their wives sat down, proved a most enjoyable affair.

J. C. JOHNSON, *Sec'y.*

Mecosta.

At the annual meeting of the Mecosta County Medical Society the following officers were elected for the ensuing year: President, F. C. Terrill, Big Rapids; first vice-president, James B. Campbell, Stanwood; second vice-president, W. A. Kuhn, White Cloud; secretary-treasurer, G. H. Lynch, Big Rapids; delegate to State Society, Joseph McNeese, Morley; alternate, Gordon McAllister, Stanwood.

Important business affairs were discussed. It was decided to extend an invitation to the District Society to hold their next annual meeting in Big Rapids as the guests of the local society. Committees were appointed and plans and outlines made for the post-graduate work for the coming year.

G. H. LYNCH, *Sec'y.*

O. M., C. O., R. O.

At the annual meeting of the O. M., C. O., R. O. Medical Society, held at Gaylord on December 18, 1907, the following officers were elected for the ensuing year: President, Dr. A. J. Pettis, of West Branch; vice-president, Dr. W. G. Young, of Gaylord; secretary-treasurer, Dr. Archie C. MacKinnon, of Lewiston; delegate to state meeting, Dr. L. A. Harris, of Gaylord; alternate delegate, Dr. E. L. Forde, of Gaylord.

The advisability of holding the meetings bi-monthly was discussed but no action taken at this meeting.

The next meeting will be held at West Branch, February 19th, 1908.

ARCHIE MACKINNON, *Sec'y.*

Shiawassee.

The regular monthly meeting of the Shiawassee County Medical Society occurred Tuesday December 3, 2:30 p. m., in the city of Owosso. Seven members were present. Dr. Parker, of Corunna, was elected to membership in the society. Dr. Hal C. Wyman, of Detroit, gave a very interesting and instructive paper on "Biliary Surgery," which was thoroughly discussed by those present.

The annual election of officers resulted as follows: President, Walter E. Ward, of Owosso; vice-president, James A. Rowley, of Durand; secretary-treasurer, C. C. McCormick, of Owosso; directors, E. J. Carney, of Durand; W. T. Parker, of Corunna, and J. N. Eldred, of Chesaning; delegate, James A. Rowley; alternate, A. L. Arnold, of Owosso.

JAMES A. ROWLEY, *Sec'y.*

Tri.

The Tri-County Medical Society held a social session in connection with the annual meeting on November 7, 1907.

The officers elected were as follows: President, Dr. J. M. Wardell; vice-president, Dr. V. F. Huntley; secretary-treasurer, Dr. W. J. Smith; board of directors, Drs. Abbott, Neihardt and Brodner; program committee, Drs. Recker, Wallace and Smith; finance committee, Drs. Moore and C. D. Miller; delegate to the Manistee meeting of the State Society, Dr. C. E. Miller; alternate, Dr. Brodner.

A banquet followed the business meeting. A number of toasts were responded to by the members and their wives.

W. J. SMITH, *Sec'y.*

Wayne.

Surgical Section, November 25, 1907.

Dr. W. H. Hutchings exhibited a patient in whom was shown the reaction which occurs, in

case the patient is tuberculous, from dropping diluted tuberculin into the conjunctival sac.

The first paper of the evening was read by Dr. B. R. Shurly on "Improved Methods of Diagnosis of Diseases of the Larynx, Trachea, and Oesophagus."

Abstract.—Direct laryngoscopy and tracheoscopy were developed in 1897 by Kirstein and improved and given a more popular position by Killian and Jackson. Special speculæ are needed for laryngoscopy, tracheoscopy, bronchoscopy, and oesophagoscopy and the procedure requires special skill. Direct laryngoscopy and tracheoscopy were considered. The first procedure is indicated where the use of the laryngeal mirror is not satisfactory, requires a local anesthetic (general in children), and should be preceded by atropine gr. 1-120 given hypodermically to check the secretion of saliva and mucus. This method is especially valuable in removing foreign bodies and giving local treatments.

As illustrative of the value of direct examination the diagnosis and treatment of papillomata of the larynx were considered. While earlier writers have claimed that papilloma of the larynx in a child demands tracheotomy alone and there should be absolute non-interference with the growth until the child can be treated as an adult, under direct illumination the larynx may now be entirely cleared of all growth. Four cases were then reported showing the advantage of these newer methods of diagnosis:

Conclusions—

1. Digital examination and direct laryngoscopy should be made in all cases of persisting stenosis.
2. Tracheotomy should be performed at once where dyspnea is moderate or severe.
3. The tracheotomy tube should remain in situ at least six months.
4. The growth may be completely removed by the aid of the bronchoscope or Mosher's laryngeal speculum.
5. Thyroidotomy is usually to be condemned. It is a method of last resort only.
6. Intubation is often useful as temporary relief until tracheotomy can be performed. No force should be used as it is impossible to insert the tube in some cases.
7. Papillomata and similar tumors should be

removed by endo-laryngeal methods alone where such methods are possible.

8. The modern treatment of papillomata should discourage the dangerous temporizing with sprays, inhalations, applications, etc.

9. The removal of a few papillomata by endo-laryngeal methods without tracheotomy is frequently followed by an increase of the warty growth.

The reading of the paper was followed by the exhibition of several instruments used in bronchoscopy and laryngoscopy.

The second paper, read by Dr. L. J. Goux, was entitled, "Obstruction to the Upper Respiratory Tract."

The paper dwelt with the general manifestations of nasal stenosis without specifying any particular class of obstructions.

The remote effect of imperfect respiration, particularly the influence of defective oxygenation of the blood, was especially considered.

The characteristic facial expression of these patients as well as the usual manifestations were enumerated.

Headache due to nasal stenosis was given special attention and was characterized as a morning headache which had a tendency to clear up during the day. In this particular it differed from headache due to eye-strain which usually developed during the day, becoming worse on close application. The eyes are often suspected of being the cause of headache while nasal stenosis is seldom suspected.

Pain in the temple is commonly due to hypertrophy or pressure of the middle turbinate on adjacent structures and the characteristic pain can often be produced by making pressure on the middle turbinate bone by means of a probe. When this can be demonstrated the pain lasts as long as the pressure with the probe is maintained. Turbinectomy usually results in complete relief of the symptoms.

Nasal anomalies were referred to as being an etiologic factor in some cases of dizziness and it was pointed out that in the process of exclusion in searching for the cause of this most distressing symptom the examination is not complete without investigation of the nasal chambers.

Cases typical of some of the special forms of obstruction were cited.

The treatment in nearly all cases is surgical and when indicated and properly executed is usually followed by marked amelioration or cure of the catarrhal symptoms as well as improvement of the general physical condition.

The papers called forth an interesting discussion.

Dr. F. B. Walker demonstrated by drawings and by organs removed post mortem from dogs a new method of lateral or end-to-end intestinal anastomosis.

C. E. SIMPSON,
Sec. Surgical Section.

Correspondence.

A Letter Describing the Clinics at St. Mark's and the Gordon Hospitals, London.

(Read at the meeting of the Saginaw County Medical Society, October 8, 1907.)

WILLIAM L. DICKINSON, M.D.
Saginaw.

Several of our members have visited London and its hospitals, and are acquainted with the physicians and surgeons connected therewith. As I was specially interested in the diseases of the rectum and colon, I spent the greater part of my time at St. Marks and the Gordon hospitals, which are exclusively for the treatment of fistula and other diseases of the rectum. I wish to speak of the cordial reception given me by the English profession, without a single exception, and can say that the American physician is always welcomed and made to feel at home by his brother practitioners.

At St. Mark's, I saw three different operations for internal piles, Mr. Edwards, the senior surgeon, making the ligature operation as follows: Having dilated the sphincters, the pile was picked up with forceps, and dissected away from anal margin, and a ligature tightly tied about its base.

Mr. Wallis makes a Whitehead operation, I think, in all cases, and he gets very fine results, as he is very particular regarding the after treatment. I saw him do several operations as follows: The patient having been anesthetized and placed in the lithotomy position, and the sphincters carefully and gradually dilated to fullest extent, taking in consideration whether the patient

is a strong, muscular man, or a weak, delicate woman, where too rough usage might do great damage to the sphincters.

After the dilatation, the piles will lie outside the muco-cutaneous line, and in plain view. He now makes an incision around, following the muco-cutaneous line, and the tissue is dissected off the external sphincters with a knife. The piles having been reached, he exchanges the knife for scissors and separates the mucous membrane from the muscles.

Mr. Wallis holds the mucous membrane with his finger and thumb, and is able to peel it off with the blunt end of the scissors in many cases. He clamps any bleeding vessel immediately. This separation of the mucous membrane is continued until the whole pile bearing area can be pulled down outside the external sphincters.

A transverse incision is now made above the piles from the outside, and a small forcep placed upon the upper cut margin of the mucous membrane. The incision is now carried around the mucous membrane, hemostatic forceps being applied wherever required. The assistants hold the upper cut end of the mucous membrane in position while four sutures are passed through the skin, muscle and mucous membrane, and tied tightly. Then the skin and mucous membrane are sewed together by a continuous suture of fine catgut. The wound is dusted with powdered iodoform, a pad applied and held in place with a T-bandage.

Mr. Wallis says in "Surgery of the Rectum," from which I have quoted quite freely, "The excellent results obtained by the operation just described are entirely due to the conscientious and skillful nursing which is given them. The aim for the first four days is to keep the wound as dry as possible. Any oozing or discharge of mucus is worked off, the surface dried with absorbent cotton, and redressed with iodoform powder and gauze. On the fourth night Mr. Wallis has castor oil given, and the following morning an oil enema. He does not keep the patient in bed for the bowel movement, saying the results are better if he gets out of bed, and sits on the commode.

Beginning on the sixth day, the patient takes one or two warm boracic hip-baths daily, remaining in the bath fifteen minutes; then the parts are dried, and dusted with oxide zinc and starch powder, and absorbent cotton applied.

To keep the surfaces apart a small piece of the

cotton is inserted just within the sphincters."

Mr. Wallis does not get a stenosis following this operation, as he takes the precaution to see the patient at the end of three weeks, and examine for any cicatricial ring which may be forming, and should he find such a condition present, he passes his fingers through it, and it disappears; but should the cicatrizing area be very great it may be necessary to use a conical vulcanite plug for two minutes for four or five nights, when any tendency to stricture will entirely disappear.

At the end of the third week, the fibrous tissue is still young and can be easily stretched. Should one wait six weeks or more before making this examination, a hard ring will have formed, which would require a prolonged treatment with bougies.

Mr. Mummery after dilating the sphincters, places a small forcep on the side of the pile, and the assistant holds them while he cuts the pile away, leaving an incision longitudinal to the bowel. The wound is now sewed up with a continuous catgut suture.

At the Gordon Hospital, I saw Messrs. Ogle, Miles and Leaf making the ligature operation for piles; and also Mr. Murray at Middlesex hospital. Mr. Barker, at the University, makes the Whitehead operation, and is very careful not to touch the parts with his fingers, using instruments instead. I saw some very severe cases of tubercular ulceration of the colon and rectum, but did not learn of any new method of treating these unfortunate patients.

I saw both Messrs. Edwards and Miles operate for carcinoma of the rectum, with very gratifying results, and at some future time, would be pleased to describe their methods, should you so desire.

News

The Council of the State Society will hold its January meeting at the Hotel Ponchartrain, Detroit, on Thursday, the sixteenth.

Dr. D. M. Campbell's office was gutted by fire during the past month and all his valuable records destroyed.

According to the decision in a court case at Owosso recently, Dr. David Austin, of Laingsburg, must pay Dr. Robb, of Flushing, \$350.00 in thirty days or discontinue practice. The suit grew out of the purchase by Dr. Robb of Dr. Austin's office and practice.

Dr. J. W. Emmons has given up practice in Buchanan and removed to Kent City, near Grand Rapids.

Dr. W. A. Russell, of Richland, coroner, has disposed of his practice and property, and removed to Montana, on account of his wife's health.

Dr. A. M. Hume, of Owosso, has been appointed a pension examining surgeon to succeed Dr. Jabez Perkins, deceased.

Dr. E. H. Lathrop, of Hastings, has gone to San Diego, Cal., for the benefit of his health.

Dr. J. H. Day has moved from Lake Odessa to Alma.

Dr. E. H. Sichler has moved from New Baltimore to Detroit, opening an office at 508 Fine Arts Building.

Dr. Howard Post has moved from Belleville to Ypsilanti.

Dr. M. S. Grimes, of Detroit, has been selected as county physician for Wayne, to succeed Dr. E. B. Forbes.

Superintendent A. W. Shaw, of Harper Hospital of Detroit, has resigned, on account of illness, and has been succeeded by Mr. F. E. Moulder, formerly assistant superintendent.

The Paulina Stearns Hospital, a new institution in Ludington, made possible by the generosity of Hon. J. S. Stearns, was opened for public inspection Nov. 14.

Dr. Julius P. Henkel, chief surgeon of the Michigan National Guard, and resident in Detroit, is convalescing from an attack of paralysis.

Dr. R. L. King, for five years a practitioner in Caro, has decided to remove to Regina, Saskatchewan, and has sold his practice to Dr. Charles H. McLean, formerly of Detroit.

Dr. W. C. Henderson, of Coldwater, has resumed a portion of his duties, after a long illness consequent upon a spinal injury.

A. B. Spinney, M. D., of Belding, to Miss Jennie Jackson, of Ionia, recently.

George P. Cooley, M. D., to Miss Annette Allen, both of Detroit, December 19.

Clark D. Brooks, M. D., of Detroit, to Miss Sallie H. Wier, of Annapolis, Md., November 20.

Orville L. Brooks, M. D., to Miss Neva Belle Hanlan, of Detroit, November 28.

Deaths

Artemus O. Wotring, M. D., Detroit College of Medicine, 1887, a member of the Michigan State and Lenawee County Medical Societies, was killed by a gas explosion in Ogden Centre, November 30, aged 46.

Dr. Watts J. Bachelor, a practitioner for thirty years in Oxford, died at his home on November 26, aged 58.

Washington A. Engle, M. D., University of Michigan, Department of Medicine and Surgery, 1857, a practitioner of Hartford for 50 years, died at his home, November 27, from senile debility, aged 81.

Theodore N. Stafford, M. D., Detroit College of Medicine, 1897, died at his home in New Troy, November 30, aged 35.

Frank A. Howig, M. D., a graduate of the University of Pennsylvania, and resident in Big Rapids 41 years, died at his home, December 10, aged 79.

Swabbing out a sinus filled with exuberant granulations with glycerin will often dehydrate them, making them fresh and healthy.

Stretching the anal sphincter alone will in many instances relieve an intense pruritus or a small prolapse of the anal mucus membrane.

Marriages

Marinus L. Holm, M. D., of Lansing, to Miss Martha Kohhase, of Wells, Minn., November 28.

Dr. J. J. Law, of Nashville, to Miss Mabel Henion, in Battle Creek, recently.

A large tumor supposedly a growth of the ovary, may be a retroperitoneal mass, usually a sarcoma, having no connection with the sexual organs.

Progress of Medical Science

GYNECOLOGY AND OBSTETRICS.

Conducted by

E. R. SCHENCK, M. D.

Fibroid Tumors and Pregnancy.—In commenting upon several recent papers dealing with this important subject, GILLESPIE says that the cardinal points to consider are, what are the dangers attendant upon pregnancy and labor in this condition, and what are the relative dangers of myomectomy and hysterectomy. The tumor or tumors will probably increase in size rapidly during pregnancy. This increase in size is usually but temporary, and is due more to a condition of edema than of actual growth. In some rare instances the tumor disappears during involution. The patient is more apt to have septic infection after miscarriage or labor, and there is a little more risk of post-partum hemorrhage or placental retention. If the tumors do not involve the lower uterine segment they will not seriously interfere with normal delivery, although artificial assistance is often called for. If the condition is such that normal delivery is impossible, or would be fraught with grave dangers, Cesarean section should be practiced at full term and the tumor and uterus removed at that time. Hysterectomy is easier at this time than at any previous period, so that with little, if any, increased risk to the mother the child is given its chance for existence.

Myomectomy is a more dangerous procedure than hysterectomy or Cesarean section and hysterectomy, and its only advantage is that it enables us to spare the organ. But in only a small percentage of cases of fibroids can the operator remove all tumors, and when he cannot leave an organ free from disease it is of questionable propriety. To judge from the histories, none of these cases would run any risk until full term was reached except the risk of miscarriage. Does this remote risk justify the institution of treatment which will render almost certain the occurrence of this accident.—*Lancet-Clinic*, Dec. 7, 1907.

Perforation of the Uterus.—The uterus may be perforated by any instrument which can be introduced into it. It has happened most frequently with the curette and sound, with the latter especially in the days when it was much used for replacing a flexed uterus. It has happened with the use of every shape of curette, but perfor-

ation is more likely to take place if the spoon shaped instrument is used than when a broader ring curette is employed. It is especially liable to happen if the uterus is not pulled down to the vaginal outlet during the operation. Dressing forceps are particularly dangerous, but placenta and polyp forceps are safe in experienced hands.

There is sometimes a predisposition to injury on the part of the uterine tissue, as in pregnancy, septic infections, degenerating fibroids, hydatid mole, carcinoma and chorioepithelioma malignum.

Cases of apparent perforation are sometimes explained on the ground that the instrument has entered a dilated tube or that there has been a relaxation of the uterine muscle increasing the size of the uterine cavity. The literature on the former point is reviewed and the proven cases shown to be rare. The latter question is discussed at some length.

Permanent utero-peritoneal fistula may result from perforation, or the uterine wall may remain so thin (from unskillful curettage) as to give trouble in subsequent pregnancy.

If the perforation is small, as one made by a sound in an aseptic uterus, the treatment consists in keeping the patient quiet. In a septic case the patient should be most carefully watched and with the advent of symptoms, a total vaginal extirpation should be done and drainage established. Intrauterine irrigation must be absolutely avoided in any case. If there are any symptoms of intraperitoneal bleeding, the posterior vaginal vault should be opened and the uterus carefully inspected. The perforation can then be readily sutured. If a perforation occur during the curettment of a carcinoma, extirpation should be done at once, and a laparotomy in case there is any possibility that the intestines have been injured.

The man not trained for gynecological work should not curet a carcinoma, for such are never emergency cases. The general practitioner, however, must often treat cases of incomplete abortion. The rule of always giving an anesthetic, of making sure that the cervix is well dilated and using only the finger should be kept in mind.—*Zent. f. Gyn.*, Sept. 28, 1907.

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

Studies on Arteriosclerosis, with Special Reference to the Radial Artery.—THAYER and FABRYN, of Johns Hopkins, made pathologic studies of arteries in 61 cases whose arterial system had been studied clinically during life, the patients ranging from 56 days to 83 years. The material was taken from the radial artery at the wrist, from the aorta near the heart and also near the mesenteric artery, and from the mesenteric artery itself. Comparisons were made between pathologic and clinical findings. The palpability of the radial, other things being equal, depends on the thickening of the coats, especially of the intima. Thickening of the media is usually accompanied by thickening of the intima, and this coincident change is particularly noticeable in cardiac hypertrophy and chronic nephritis. The arteries which clinically were considered thickened were found to show connective tissue increase in the intima. Beaded, tortuous arteries usually proved to be due to calcareous changes in intima or intima and media. It is in the fifth decade that the connective tissue changes in the coats begin to be marked, corresponding to the usual clinical observation of thickened radials at the same period of life. The aorta and mesenteric artery showed changes practically identical with the radial, except that calcification occurs less often in the latter and plaques of fatty degeneration are common in the aorta but not seen in the radial.

The authors conclude that in old age a thickened radial is to be expected. That thickening earlier than fifth decade means unusual strain upon the arteries, or inherent weakness of arterial walls, rendering them unequal to combat normal stress. Thickening of the radial usually means thickening of other arteries, and when excessive, should be regarded as a danger signal.—*American Journal of Medical Sciences*, Dec. 1907., p. 811.

The Acetonaemic Conditions of Children.—

LANGMEAD of London divides patients showing diacetic acid and acetone in three groups. *First*, those who show no symptoms except the acidosis, as in starvation, high fevers, gastric ulcer, etc. *Second*, those whose acidosis complicates some other well defined condition, as in diabetes, intracranial disease, intestinal obstruction, etc. *Third*,

those who show symptoms referable to acidosis uncomplicated by other conditions. The "symptoms of acidosis" are apathy, coma, delirium, thirst, fever, febrile facies, acetone breath, nausea and vomiting, acetone, diacetic acid and B-oxybutyric acid in the urine. He describes three cases following anesthesia, and also gives post-mortem notes, showing the usual condition of yellow liver infiltrated with fat. He cites cases of cyclical vomiting which manifest recurrent acidosis. He regards the fatty degenerative changes as the result and not the cause of the altered metabolism, and he regards the underlying excitant as a toxemia, either of intestinal, febrile, or inorganic, origin. Such toxemia produces fat faster than it can be oxidized, and under certain conditions, as yet unknown, this imperfectly oxidized fat produces acidosis.—*British Medical Journal*, Sept. 28, 1907, p. 819.

Epithelioma of the Penis. An Analysis of One Hundred Cases.—J. DELLINGER BARNEY, of

Boston, in a study of these cases, concludes as follows: "Epithelioma is practically the only kind of cancer attacking the penis, and in frequency forms only from one to three per cent of all cancers. It occurs most frequently during the fifth, sixth and seventh decades of life. Phimosi is pre-eminently the most important of its exciting causes." Circumcision is therefore a factor in prophylaxis. "Most cases seek relief during the first and second years of the disease, but it is not unusual to see cases of from five to fifteen years' duration. Pain occurs in 43.5% of all cases. Enlargement of the inguinal glands occurs in over 75% and in 60% of the glands are cancerous. Glandular involvement * * * is of rather late occurrence. Invasion of vital organs occurs in 15%." Recurrence after operation happens most often within one year. Operative mortality is one per cent. Gross mortality is 32% and 38% of cases are cured. The operation of choice is early amputation of the penis at the pubes with complete dissection of the groins. The length of life from time of onset in primary cases is three years and four months; in recurrent cases eight years and three months.—*Annals of Surgery*, Dec. 1907, p. 890.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Aphasia.—The distinguished French investigator, Pierre Marie, has put forth some new views as to aphasia. He maintains that aphasia has been grossly misinterpreted, upon grounds purely theoretical. He is disposed to deny that there exists in the left hemisphere an auditory verbal center in the first temporal convolution or that there exists a visual verbal center in the left angular gyrus, or that there exists a center for writing in the left second frontal convolution or a motor verbal center in the third (left frontal convolution). And he accordingly believes that the interpretations based on these long accepted assumptions are erroneous. He interprets aphasia rather as a disturbance of the intelligence; a disturbance which results in a special defect for the comprehension of language, and he points out that in most of aphasia cases ability is present to comprehend isolated words, short phrases, or the comprehension failing as sentences and ideas grow more complex. Marie regards the zone of Wernicke as an intellectual rather than an auditory center.

DERCUM holds that aphasia is a unit and not made up of sensory aphasia and motor aphasia, but that in the former the lesion involves the zone of Wernicke; while in the latter there is in addition an involvement also of the lenticular nucleus.

Cases have been reported in which the third frontal convolution has been involved in softening without disturbance of speech, as also cases in which this convolution escaped, but in which motor aphasia was present. Dercum then reports a case belonging to that group in which the lenticular zone and the white matter alone are involved in deep softening, the cortex escaping.

The lesions of the lenticular zone, he thinks, explain the anesthesia present and probably also the interference with motor speech.

F. X. DERCUM in the November, 1907, No. of the *Journal of Nervous and Mental Diseases*.

Arterio-Sclerosis in Relation to Mental Disease.—This article, citing cases in point, is thus summarized by its author:

1. "While arterio-sclerosis of some degree is a commonplace finding in cases of mental disorders, especially in advanced life, there are cases where the cardio-vascular disorders seem to be the central element in the clinical and anatomical picture.

2. Certain cases symptomologically described as melancholia, hypochondria, neurasthenia, etc.,

may be better grouped on etiological grounds as cases of arterio-sclerotic brain disorder.

3. In certain cases of organic dementia the arterio-sclerotic changes are obviously the most important element in the process and the term, arterio-sclerotic dementia, is justifiable, but the relation of certain mental symptoms to similar ones in the pre-senile and senile psychoses must be kept in mind.

4. The neurological picture in advanced cerebral arterio-sclerosis is still ill-defined, and for the differential diagnosis of the various organic dementias further clinical material is required.

5. In certain cases of epilepsy with onset in later life, the convulsions and general symptomatology are closely related to arterio sclerosis.

C. MAC FIE CAMPBELL, E. SC., M.E., CH. E.—in Nov., 1907, number of the *Review of Neurology and Psychiatry*.

Psychical Mutism.—A locomotive fireman, 22, on Aug. 24th, 1904, while on top of a freight car, ran against a live trolley wire, which struck him on the root of the nose. He said that the "current passed through him" and he fell on the roof of the car unconscious and continued so for 24 hours. He could swallow, move his tongue and mouth well, but could not speak. No serious organic injury could be found. He claimed to want to speak but was unable to do so. Hospital treatment and various expedients attempted in the hope of surprising him into speech proved unavailing. He came under observation in June, 1905, and was discharged Sept. 1st, 1905, unimproved. He was again admitted in Nov. '05, and on 26th, complaining of a headache, he attracted the nurse's attention by moaning and restlessness, his jaws chattered, head thrown back, arms and legs were in motion, eyes closed; pupils in moderate dilation, limbs non-spastic, knee jerks increased; fairly general analgesia. Pin-pricks caused no movement, except over nipples. Irritation from holding aromatic spirits of ammonia to his nose finally induced him to say, "Take the damn thing away, I do not want to smell it." He thereafter answered questions and on coming out of his attack had perfect possession of his speech functions.

Total loss of speech from purely psychic causes followed by sudden and complete recovery is rare and must be hysterical in origin.

J. K. MITCHELL in April, 1907, Number of the *Journal of Nervous and Mental Diseases*.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

The Bottle Operation Method for the Radical Cure of Hydrocele.—Open operations for the radical cure of hydrocele may be classed as of three types:

1. Packing or tamponade of the sac, causing adhesive inflammation. 2. Resection of the sac or portions of it. 3. Eversion or backward suturing of the two halves of the bisected sac.

1. "Seton" or Open Packing. "Volkmann's Operation." The earliest use of the packing method always caused suppuration, as it preceded the antiseptic era. Later, when aseptic methods prevailed, it was found that sterilized gauze packing would bring about the same result without micro-organisms. This, to be effective, must go to the extent of causing somewhat intense irritation of the serosa and swelling of the scrotum, disabling the patient for rarely less than two or three weeks. The thickened parietal and visceral layers cause enough reaction to be somewhat painful and to require recumbent treatment. The method, nevertheless, is a very reliable one.

2. Excision of Sac Wall.—It requires less severe reaction,—theoretically, none at all—to cause plastic union between one serous surface and the dartos or connective tissue; hence, if the outer layer of the hydrocele sac be excised, and the visceral or that covering the testis remain, an excellent cure is obtained quickly.

Practically, excision of the sac is too bloody to be called a neat and rapid method. The bisecting cut along the anterior median line is bloodless; but the lateral cuts cross rarely less than half a dozen vessels, requiring separate ligatures. This takes away all the neatness and speed of the operation.

3. Eversion of Sac.—Jaboulay's method (called Winkelmann's method in Germany) consists in first bisecting the sac by a vertical incision along its anterior convex surface, after isolating it outside the scrotal skin. The two halves thus formed are then everted and brought together back to back behind the globus major and epididymis, so that the whole serous lining faces outward. Any one not a novice can make this dissection so nearly bloodless that the tissues do not become sodden.

4. The author's bottle operation is conducted as follows: An anterior scrotal incision is made as in the older methods. The tissues should be held tense and the dissection should be nice to the exact layer which will enucleate the translucent bladder-like mass from its bed.

Careful study of the funicular part of the sac is now to be made. Usually a little funnel continues one or two cm. up the cord. The extreme upper end of this marks the beginning of the cut into the sac. This cut is vertical, on the anterior border, and only about two cm. long. The incision in the sac is prolonged to its extreme upper end along the cord if the first cut did not do this. When the sac has been emptied, it is like a bottle or bag, with a small hole at the top. Dilating this slightly with one or two fingers, the orifice is held open and the testis is pushed up into it with the other hand. In a moment it can be squeezed through, and the whole sac will instantly be everted with the small buttonhole so closely surrounding the cord that it is scarcely visible. It will also be seen at a glance that there is no possibility of the testis returning into the hydrocele cavity. The short incision contracts, so as to fit around the cord, and the whole sac by its elasticity seems to collapse around the epididymis. Ordinarily, the largest hydrocele sacs when collapsed assume about the size of the testis, showing that their walls remain perfectly elastic. As yet the author has not tried the method on any very opaque, hypertrophied or thick-walled hydrocele. It is conceivable that some such old cases resulting from inflammation, injections, or former operations, might be difficult to enucleate from the scrotum, or to evert bringing outside the skin.

The skin is quickly closed with clips or light suture, without drainage. Such wounds heal within a week. The patients get about readily on the third or fourth day, sometimes earlier. The amount of swelling about the testis is usually small, even in double hydroceles. Tenderness and pain are moderate or absent, and no fever and malaise are felt after the second day.

This operation is very suitable for local anesthesia, and therefore can be done on the aged without risk. Its results are in striking contrast with the old packing or open method. Koenig reports that the average confinement with this method was three weeks, and also that some patients were disabled fully as long by injection treatment, which also gives a large percentage of failures.

No complications have occurred in a considerable series of these operations in the author's clinic, and, so far as can be learned no recurrences. The recovery has without exception been rapid and practically painless.—E. WYLLYS ANDREWS, *Annals of Surgery*, Dec., '07.

ACTINO THERAPY.

Conducted by

H. R. VARNEY, M. D.

The Opsonic Method in Skin Diseases.—The author states that opsonins, though not as yet isolated from the blood serum, possess a distinct action which can be estimated as reported by Douglas.

By comparison of various sera according to the technic outlined by Wright, one is able to obtain varying results which may be used for the estimation of the individual resistance, to the organisms in question.

The method has been proved to be accurate, within the limits of a 5% to 10% error which is admitted.

The opsonic method may be used for diagnosis or, in conjunction with the inoculations of bacterial vaccines, for treatment.

The diseases of the skin for which the method is useful are the primary and secondary staphylococcal infections and tuberculosis.

The writer's conclusions as to the therapeutic value of the opsonic method in localized infection of the skin are as follows:

1. The opsonic method in boils is always successful and is the only form of treatment for general furunculosis that is in the slightest degree reliable.

2. In sycosis the method is a valuable one, but must be continued for long periods in proportion to the duration of the disease, and is best combined with X-ray epilation.

3. In acne the treatment is uncertain, some results being astonishingly brilliant, others entirely negative.

4. In septic dermatitis and ulcers the treatment is of distinct value as an auxiliary.

5. In Bazin's Disease the treatment is somewhat uncertain, but it is often of help. In tubercular ulceration it is of great value.

6. In Lupus vulgaris the treatment alone is too slow and uncertain to be recommended. It is according to Bulloch a valuable auxiliary in those patients who relapse after Finsen's treatment, and I have found it of value combined with X-rays.

Read by Dr. Arthur Whitfield, London, Eng., before the Sixth International Dermatological Congress, New York City, Sept., 1907.

Reports of 800 Dermatological Cases Treated with X-Ray and High Frequency Currents

at the Mount Sinai Hospital.—The diseases treated and the final results obtained with these forms of treatment are briefly summed up as follows:

Epithelioma. Results accomplished depend upon proper choice of cases. Most favorable are those situated on the surface of the epidermis. The best results are achieved by a combination of X-ray and high frequency spark. In deep-seated carcinoma there is very little to be expected. It is more encouraging in the various forms of sarcoma.

In *acne vulgaris*, the results are very gratifying, while in *acne rosacea* there is very little to be accomplished. In psoriasis the value of the X-ray is well established, also in different forms of eczema.

Lichen chronicus, *lichen planus*, and *lichenoid eczema* conditions are more stubborn, but generally yield to X-ray treatment.

Lupus erythematosus does well with the high frequency spark treatment, but it often recurs.

Lupus vulgaris affecting the mucous membrane is best treated with the X-ray, while other parts of the skin with the high frequency spark.

Various types of *verrucae* and *naevi* can be readily destroyed with the high frequency spark.

In *keloid*, to expect permanent results, we must persist with the X-ray until a fair degree of dermatitis is produced.

Folliculitis decalvans yields well to X-ray treatment.

Pruritus is beneficially affected by both the X-ray and the high frequency current.

Myeosis fungoides can be indefinitely controlled by the X-ray, but not cured. Treatment must be kept up, or lesions return; while in *rhinoscleroma* we get probably a definite cure.

In *syecosis*, *favus* and *trichophytosis capitis* the results accomplished with the X-ray are very satisfactory, but in the latter two we must use other treatment in addition.

Hypertrichosis can be cured with the X-ray, but requires very careful technique.

Hyperidrosis may be benefited, but only after a long series of treatments.

Report presented by Dr. Samuel Stern at the Sixth International Dermatological Congress, New York City, Sept., 1907.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

Massage, an Occupation for the Blind.—L. WEBSTER FOX says the very important question of providing employment for intelligent blind persons is now occupying more than ever, the attention of all who are interested in their welfare, and certainly none is more solicitous for their welfare than the ophthalmologist.

From time immemorial massage has been practised by the blind in Japan, and a few years ago, the "Institution for Massage by the Blind" was introduced in England, where it was received with enthusiasm, Sir Anderson Critchett being one of the directors. There are now 21 masseuses and 15 masseurs on the list. In this country, for some years past, instruction in massage has been given to blind persons in the Philadelphia Orthopedic Hospital, and several have gone forth from that institution certified as having gone through the regular course of training. The author speaks of the satisfactory work these graduates have done, and believes if the profession would more generally hold out a helping hand to the blind by testing the work they do, just so soon will the public confidence in them be assured and a fairly remunerative occupation for the blind be definitely established.

The Philadelphia Orthopedic Hospital has a "Committee on Schools," of which Dr. Fox is chairman. He says no course of instruction is given anywhere in this country equal to that given at the Orthopedic Hospital. The instruction is carried on in a systematic manner by competent instructors under the supervision of one of the ablest staff of physicians in Philadelphia.

After reviewing the work done in Japan and England, giving extracts from letters from men and women working along this line, he concludes as follows:

"The Orthopedic Hospital has opened its doors for all blind pupils who wish to prepare for this work, and it is the wish of the Board of Managers that this school may have many applicants, so that the good work inaugurated by our staff of physicians may continue its instruction in

years to come, to the advantage and benefit of this unfortunate class—the blind."—*Ophthalmology*, Oct., '06.

The Eye in Death.—DE MICAS discusses the value of the varying conditions of the eye in and after death as certain signs of death, and, further, the varied state of the eye in death from special causes, in particular diseases or from violence. Except in death in local or general anesthesia, the loss of sensibility of the conjunctiva, especially in the limbus, is of great value.

The early dilation of the pupil after death and its almost immediate loss of sensibility to light or to mydriatics or miotics is important. The dilatation passes off in a few hours and it is also liable to some variation in cases of disease such as iritis, cerebral conditions or poisoning. The loss of irritability of the iris is of great importance, though the reaction to light has been observed to persist for a time after death from cholera.

The loss of reaction to drugs as a sign of death is not invariable because in life some irides will not react to atropine or eserine. Ophthalmoscopic examination is possible for a few hours after death, but the cornea soon loses its transparency, the structure becomes glassy, rumpled, flaccid, and soft. These signs, the author says are certain, but may be delayed in cases of drowning. The sclerotic changes in color through yellowish tints, to bluish, to blackish.

The author quotes Louis: When the globe preserves its natural firmness it cannot be certain death has occurred, whatever other signs of death there may be. After death from violence the eyelids are generally open, though there were many exceptions in the experiments conducted on animals slaughtered for food.

Finally, the author deals with the conception of authors of romances, who describe so vividly the photograph of the villain imprinted upon the eye of the victim; when in truth he says, "it only exists in the heated imagination of the fluent scribe."—*Recueil d' Ophthalmologie*, 1906.

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Original Articles

THE TREATMENT OF FELONS*

J. WALTER VAUGHAN, A. B., M. D.,

Detroit.

In the first place, I wish to state that the term "felon" is a general term, and by that I mean that it conveys nothing to the mind that gives the hearer a clue as to the exact condition that presents. By the term felon, or whitlow, which is synonymous, we understand simply an infection of one or more fingers, without any reference to what structures are involved. For this reason it seems to me that the less common word "paronychia" should be used more generally, for in conjunction with it, it is always proper to append that adjective which shows what condition is present. Thus, when the lesion is in the skin only, the condition commonly known as a "boil" or "furuncle" is termed "paronychia cutis." Included in this might also be classed that inflammation known as phlegmon, where the infection also involves the deeper layers underneath the skin, the subcuticular fat and fibrous tissue, but in accordance with the more marked scheme of division the term "paronychia subcutis" would be preferable. Next in order we have finger infections in which the tendon is involved and certainly this

condition is sufficiently more serious and the prognosis concerning function and cosmetic effect more reserved, so that we are warranted in giving a different name from that which is applied to either of the two comparatively simple conditions mentioned above. Thus the term "paronychia tendinosa" would present to the mind of any of us a clear and definite picture. Finally we have those conditions in which the periosteum of the phalanx or the bone itself is affected and these are termed "paronychia periostia" and "paronychia ossea," while if a joint is also involved the term "synovitis membranae" would be added. It is true that these latter conditions almost invariably are associated with the first-mentioned to a greater or less degree; for instance, we may have a puncture wound in which the infection begins primarily in the tendon and later the surrounding tissues become involved, and we may have all conditions combined, yet either a tendon or a joint infection with extension to the surrounding parts is sufficiently more serious than a simple paronychia cutis to warrant the giving of a different name.

A paronychia, then, is an acute infec-

*Read before the Wayne County Medical Society, November 4, 1907.

tion of the finger which usually ends in abscess, and the cause is always bacterial. The severity of the condition depends upon two things, the structures involved, and the infecting organism. A streptococcus infection is usually much more serious than one caused by the common pyogenic organisms. The infection usually enters by the aid of a cut, scratch or prick, although it is stated that it may enter by the blood-stream, in which case trauma first lowers the resistance by causing a cellular exudation and stasis. However, as stated before, the severest forms of infection usually follow puncture wounds, such as are produced by sticking pins into the fingers or, as frequently happens in surgery, the introduction beneath the skin of an infected needle.

As this paper is to deal simply with the treatment of these conditions, we will not consider the symptomatology; suffice it to say, that the most prominent of the symptoms is pain. Rubor, dolor, and tumor are always present and the temperature is, at least in the severe infections, of rather high degree when we consider the extent of the lesion.

Whatever form of paronychia presents, certain rules should always be adopted in the treatment. First, rest is absolutely essential, and by that, I mean not simply that the patient is to be told not to use the finger, but the finger should be splinted in order to secure absolute rest. Usually it is better to splint the finger next to the infected one with the latter, as the possibility of motion is much diminished by so doing. The infected finger of course should always be bandaged and a moist dressing next to the skin is to be preferred. In a few cases of low grade infection, this simple procedure, with the application of the ice-bag to the infected part, will be sufficient to secure a cure, but such cases are rare and, where the symptoms are severe, delay with such measures is sure

to be disastrous, since time is given for the infection to spread and important structures which might have been spared are apt to become involved.

If there is extreme tenderness, accompanied by temperature, the treatment of this condition, no matter what structures are involved, is early incision. Together with this, a wet dressing should be used and the hand be put at rest. The injection of pure carbolic acid, or any other drug which causes considerable tissue necrosis, is to be condemned, as, in the majority of cases, this will do more harm than good and the continuation of the infection in the tissue destroyed by the strong chemicals and the surrounding tissue, usually results in more deformity than there would otherwise have been. The best solutions for wet dressings, which should always be applied after incision, are either a saturated boric acid solution or a weak bi-chlorid (1-5000 or 1-10,000).

"Paronychia cutis":—These infections are always superficial in nature and more apt to open on the skin and discharge their pus than to affect surrounding tissues. Sometimes splinting is sufficient treatment, but if there be much involvement, incision will always hasten the cure.

"Paronychia subcutis":—This condition requires essentially the same treatment. In many cases no definite accumulation of pus can be found when the finger is incised, but if the operator will always consider that the point of severest pain upon pressure is invariably the point of progressive infection, it will aid much in the selection of the point for drainage. The tissues in this location are so dense that fluctuation is rarely present and never should be waited for as it renders the involvement of the more important structures almost certain.

"Paronychia tendinosa":—When the tendon is involved in an infection of any

finger we are confronted with an entirely different condition than in any other form of paronychia. Here the extension of infection along the tendon sheath is usually very rapid and the sheath must be opened in the entire extent of infection. Frequently an extension of the infection, even after this primary tendon incision, is observed, and it may extend from the tendon of the infected finger to those of other fingers and also farther along the course of the infected tendon. In these cases free incision wherever the infection extends is essential and such wounds should never be sutured, but, on the contrary, packed and kept open with gauze so that the best drainage possible will be secured. Wet dressings should be applied and both the hand and forearm splinted.

During the past year we have treated a considerable number of these cases in the manner described above, combined with Bier's hyperemia. The hyperemia alone is of no value, but when combined with free incision, the duration of disability seems to be much lessened. Granulations form more quickly and the danger of extension of the infection seems to be reduced.

It has been our practice to apply the hyperemic treatment by means of a broad rubber band, from 3 to 4 inches wide, which is applied to the arm a short distance above the elbow. Care should be taken in the application of this bandage, in that it should be tight enough to obstruct the free return of venous blood from the arm, but should in no way interfere with the arterial flow. The application of the bandage should not cause pain or paresthesia nor must the arm below the bandage be cold or feel cold. Considerable edema should be present and consequently the dressings over the wound and the bandage which holds the splint in place should be applied very loosely. In these acute infections it has been our practice to

apply the bandage for periods of from four to six hours at a time, twice a day. A leucocyte count will frequently show an increase of leucocytes in the arm below the bandage over the observed leucocytosis in the general circulation.

"Paronychia periostia":—The original infection may be in the periosteum itself or may result from neglected infection of the surrounding tissue. In addition to the treatment given above, the periosteum must be opened and the pus evacuated. Tendon infection may or may not be present, and, if not, the tendon should not be opened. If drainage is not instituted early, bone necrosis is most apt to follow, and we have the condition known as "paronychia ossea," the treatment of which is essentially the same with the addition that dead bone must be removed. If a joint is involved this must be freely opened, and, in many cases, a stiff joint is the best result that can be promised.

In the simpler forms of paronychia and in palmar abscesses, the Bier's treatment can be applied by means of suction cups which should be left on for 15-30 minutes at a time, and this will often hasten the cure.

The opsonic method of treatment is of no avail in acute infections, but where granulations form slowly and the wound does not seem inclined to heal, even after all evidences of the extension of the infective process have ceased, a closure may sometimes be more quickly brought about if the physician will always take time and pains to obtain good cultures from the infected tissues. The injection of anti-streptococcic serum is, as a rule, of no value, although a few cases are reported in which the observer has given this serum credit.

It seems almost unnecessary to state that incisions should always be made longitudinally upon the fingers, but only a few months ago I was given opportunity to see a case in which a cross

incision had been made which completely severed the tendon. In incising the wrist and hand, care should be taken not to injure the median nerve or the palmar arch, and it is always well to refresh one's memory upon the anatomy of these parts. A bandage applied tightly above the wrist will render the operation less bloody and these structures can thus be more easily avoided. It will also aid to first incise the skin and fascia in this neighborhood and then proceed with the dissection by forcing a pair of blunt hemostats into the abscess cavity and opening the same. By this means, without injury to nerves or vessels, the tissues can be pulled apart and afterwards held separated with gauze packing so that good drainage is obtained.

Acute lymphadenitis is rather a frequent complication of any form of paronychia. The glands at the elbow may be the only site of infection or those of the axilla may also be involved. Sometimes the epicondilar glands of the elbow are but slightly affected or seem to be spared while those of the axilla suffer severely. I believe that an axillary infection is a contraindication to the use of hyperemia by the band method, and also that, if hyperemia is produced in the early treatment of paronychia, by

this method, glandular infection is less liable to result. The presence of these secondary lymphatic infections is sufficiently common, however, to warrant a few words in regard to their treatment. The ice-cap should be applied in the early stages, and if this fails to prevent suppuration and peri-adenitis results, incision should be made and the abscess cavity packed. Not infrequently an acute lymphadenitis will become a chronic lymphadenitis. This means that the process will not advance to the stage of suppuration, but after all acute symptoms have disappeared these glands will remain permanently enlarged. If this be true, a sufficient time after convalescence from the primary infection, and the patient yet suffers from slight chills and slight evening rises of temperature, it is far safer for the patient's after-health to remove in toto the chain of infected lymphatics.

In conclusion I would say that a person suffering from a rather severe infection of this nature had best be kept in bed and general supportive measures adopted. The constitutional treatment must be judged by the severity of the infection present, which may be anything from a minute pustule to the most severe grade of septicemia, so severe even, as to result in death.

Large intraabdominal abscesses are often better drained by making a counter-incision in the lumbar region.

The blood should be examined in all cases of gangrenous gingivitis for evidences of acute lymphatic leukemia.

Woven silver wire for suture material in a recurrent hernia will often succeed when all other means fail.

Bilateral swelling of the knee joints without pain, in a child, is due either to syphilis or tuberculosis, more likely the latter.

Orchitis after an operation for hernia is best relieved by wet or glycerin dressing with elevation of the scrotum.

A tumor in the soft parts of the cheek near a tooth cavity is often a dentigerous cyst. If the tumor is hard an odontoma may be diagnosed.

EPIDEMIC ANTERIOR POLIOMYELITIS*

W. L. GRIFFIN, M. D.,
Shelby.

I have been requested to present a paper on this subject from the fact that we have been having an epidemic of paralysis among children and young people in Oceana county. It has been my fate to have the majority of these cases.

In presenting this subject I shall not endeavor to give you a scientific exposition, for any of our text books on pediatrics will amply cover the ground, and, on the other hand, I do not consider myself competent to handle the subject from that standpoint. We will give you briefly the general symptoms as they have manifested themselves, a history of a few of the cases, and a demonstration of existing conditions by presenting a number of patients who have kindly consented to be present to day.

The initial symptoms which came on quite acutely were elevation of temperature, ranging from 100° to 102° , nausea and vomiting, griping in the bowels, severe pain in the back of the head and neck with retraction of the head. Within 24 to 48 hours after the beginning of the attack, motor paralysis would manifest itself in some portion of the body. The range of the paralysis was quite extensive, in some cases being almost total, in others only partial; one side of the face; one or both sides of the neck; one or both shoulders; one or both arms; the muscles of respiration; the abdominal muscles; one or both hips; one or both legs. There would also be an ab-

sence of the reflexes in the affected parts and a cold flabby feeling to the touch.

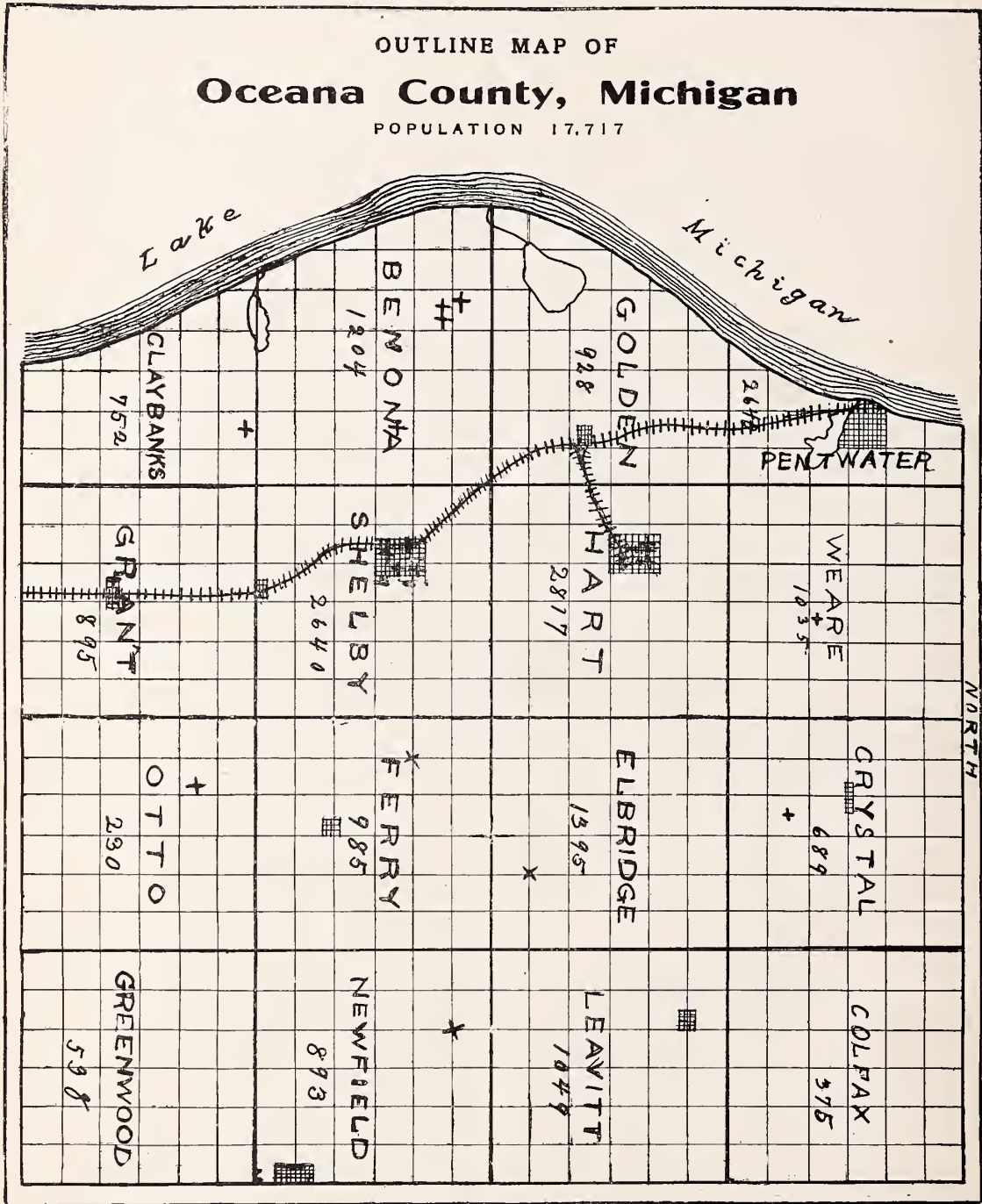
After the first 24 to 48 hours the gastric and intestinal trouble would abate, also the severe pain in the back of the head, neck, and lumbar region. Quite frequently other members of the family, adults included, would have the same symptoms without the paralysis.

After the acute symptoms had subsided there followed a marked hyperesthesia of the whole body, especially over the parts affected, also intense pain was produced by the slightest movement of the paralyzed limb. There was also a tenderness along the spine, but not so marked as in the limbs. The most tender parts of the spine were in the cervical and lumbar region. Frequently there would be cases of this tenderness unattended by paralysis. I will now give you a history of a few of these cases.

Case 1.

On July 23d, 1907, I was called to see Russel L., aged 3 years. He was having an attack of nausea and vomiting, with severe pain in the head, retraction of the neck, a temperature of 102° and a rapid pulse. Upon visiting him the second day he was unconscious, with temperature and pulse about the same, also very labored respiration. On the third day it was discovered that he had almost complete motor paralysis of the whole body. About the fourth day consciousness returned and the slightest touch would cause him to scream with pain. The paralysis continued about two weeks. Then he began to move the fingers of the left hand. Motion gradually returned to the left arm, so that in two months he had its full use. In about four weeks, he regained the use of the right hand, but the arm remained powerless. The

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lower limbs remained totally paralyzed, with the exception of a slight movement of the toes. After the first four weeks the pain in the body gradually disappeared. His appetite and digestion were good and he continued to improve until Sept. 15th, about seven weeks from the beginning of the attack, when he was taken with influenza, together with the rest of the family. Bronchitis set in with a profuse bronchorrhea which resulted in his death on the 17th.

Death would probably not have occurred in this case had it not been for the weakened condition of the respiratory centers caused by the paralysis. This was the most severe case among my patients and the only fatal one.

Case 2.

Within a few days after the boy was taken sick, His little sister, Helen L., age 7 months, was taken with similar symptoms but in a much milder form, resulting in the paralysis of her left leg. After two weeks she gradually regained its use. At the present time she has fully recovered with the exception of a slight eversion of the leg and foot.

Case 3.

On July 25th, Eddie M., age 14 years, uncle of the boy who died, was taken sick in the same manner and in twenty-four hours his left arm and shoulder were completely paralyzed. In a short time he recovered his usual health. He now has the full use of the fore arm and hand while the arm and shoulder have improved but slightly. There is quite a marked atrophy of the muscles of the arm and shoulder. The initial attack in this case was one of the mildest, but the present conditions are the least promising for a complete recovery. In this family both the boy's mother and an adopted daughter, aged 6 years, had the initial symptoms, but without the paralysis.

Case 4.

On July 26th I was called to see Lawrence C., age 3 years, living 16 miles from the other patients. His symptoms were the same, but not severe. Both legs and hips were paralyzed. In two weeks' time he began to use the legs slightly and in four weeks was able to walk. He has fully recovered.

Case 5.

On Aug. 16th Miss Edith R., aged 22 years, was taken sick similar to the others, and in about a week discovered that she could smile on one side of her face only. She has not yet fully recovered.

Case 6.

On Aug. 31st, I was called to the home of Mr. W. Four of his children were taken sick with the same premonitory symptoms, but all save one escaped the paralysis. This one, a little girl, age 3 years, had complete paralysis of both hips and lower limbs. Her recovery has been very slow and she is still unable to walk, though she has some slight use of the limbs and can creep about on the floor. Aside from the paralysis, her physical condition is normal and she is a perfect picture of health.

Case 7.

On Oct. 12th I was called to see Zetta B., age 10 years. She has three brothers, who were all taken sick at the same time with her, five weeks previous to my visit. I learned from her mother that she was unable to move any portion of her body for several days. She had fairly good use of her left leg. The other leg she could extend and flex slightly, but could neither abduct nor adduct the same. The treatment in this case previous to my seeing her had been practically negative. She had only received such home remedies as her mother prescribed. We have been giving her during the last four weeks syrup of hydriodic acid three times a day, galvanism two or three times a week. Today she is able to walk and to go up and down stairs unaided.

Case 7.

Don P., age 11 years, was taken sick on Aug. 31st with the usual symptoms of the disease. In a few days it was discovered that he could not use his left arm and that he had a peculiar gait. This case is particularly interesting from the fact that no physician has been employed, the parents thinking that the initial symptoms were so mild that no medical aid was necessary. At the present time he is able to use his arm and to walk without any noticeable defect, still the muscles, as yet, have not regained their normal tone.

Treatment.

The treatment in these cases has been wholly symptomatic. For the gastrointestinal trouble we used small divided doses of calomel followed by a cathartic. For the severe headache and pain, phenacetine and codeine. To allay the nervous symptoms, hyoscyamine, and the bromides were used. After the acute symptoms had subsided we gave syrup of the iodide of iron and hydriodic acid. For the muscular soreness, the salicylates and strychnine were used. After the soreness subsided, massage of the affected muscles with olive oil and oil of wintergreen. In some of the cases galvanism and later a weak Faradic current. In other cases little or no treatment was given, and they seem to have recovered equally as well.

Summary.

The greater number of cases occurred the latter part of July and in the months of August and September. There have been no new cases reported during the last four weeks. As near as we can determine there have been twenty cases in the county. During a similar epidemic in New York city the past sum-

mer 400 cases were reported in the hospitals. In proportion to the population there were about ten times as many cases in Oceana county as in New York city.

You will see by the map that the epidemic was quite generally distributed. Benona, Shelby and Hart townships having the greater number of cases. Considered from the standpoint of age, the summary is as follows: Nine cases occurred between the ages of two and three, one at seven months, two at seven years, two at ten years, one at thirteen, two at fourteen, one at twenty-two and two at twenty-four. The classification as to the location of the paralysis is as follows: In nine cases, one arm was paralyzed; in seven, one leg; in two, both legs; in one, one side of the face; and in one, all the limbs were paralyzed. Our motive in presenting this paper may have been a somewhat selfish one, for we realize what these conditions portend for the afflicted ones and their relatives. Any questions you may ask myself or the patients presented here today, we will endeavor to answer to the best of our ability. And in return, we will be many times grateful for any suggestions you may offer which will aid in their restoration.

ADDITIONAL REPORT OF A CASE OF POLIOMYELITIS.

CHARLES F. SMITH, M. D.,
Whitehall.

Oct. 4, '07.—Miss T. D., age 22 years. Mother called at my office and said she was complaining of headache, pain in back, nausea, vomiting, bowels constipated; had been so for four days, but seemed worse today, remaining in bed all day; gave her treatment for the above and advised if not better next morning to report.

Oct. 5, '07. Patient's brother called me over

phone, saying she was no better, so visited her during the day; found her in bed complaining of same symptoms as yesterday, only worse, and pain in limbs, which were very sensitive to touch and unable to stand on them, seeming not to have any control of them at all. Temp. 101° F. Pulse 85. Two defecations, result of cathartic of yesterday; also learned that she had been

working at one of the summer resorts on White Lake during the summer and it had been her practice to go in the lake bathing every evening as soon as her work (as cook) was done, and sometimes was quite warm when she went in and the water being cool would chill her, and after going to bed on such nights would experience shooting pain in back and through the body.

Oct. 7, '07. Complains of severe pains in both limbs and slight pains in head and back and very restless, otherwise the above symptoms are better, though she could not move limbs at all. Temp 100°. Pulse 85.

Oct. 9, '07. Complains of pain in limbs, but not so severe and a peculiar feeling in right arm, though she can use it. Vomiting and no appetite. Urinates with difficulty. Temp. 102°. Pulse 90. Sleeps poorly.

Oct. 10, '07. Reports feeling better after a good purging.

Oct. 14, '07. Has pains in back, soreness in limbs, the right one being worse and queer sensation in right arm, though can use it. Cannot lie in one position very long at a time, on account of the pain in back, along which there is an eruption, more pronounced over lumbar region. Temp. 99°. Pulse 80. Bowels regular.

Oct. 19, '07. Complains of severe pains at night otherwise feels well except that she cannot use her limbs.

Oct. 24, '07. Still has some pain in limbs at night, but is improving a little, can stand up alone for few moments and with help can walk few steps, but drags right foot. Her condition has remained about the same to date, Nov. 26, '07, only that she does not experience much pain in limbs or back and it exhausts her to try to walk or even stand for very long at a time.

A CASE OF OTITIC MENINGITIS*

R. BISHOP CANFIELD, M. D.,

Professor of Otolaryngology, University of Michigan, Ann Arbor.

Patient: Schoolgirl, age 14 years. Was brought to the University Hospital on account of a suppurative middle ear disease of the left side.

History: Patient had scarlet fever at the age of one year. Both ears discharged at the time. At the same time a swelling appeared behind the ear. This was lanced and the wound soon healed. The discharge from the ear, however, persisted for about two years. From that time a little discharge appeared occasionally. About a year ago, during a head-cold, pain in left ear reappeared together with an increase in the amount of discharge. Two weeks previous to admission to the hospital, during a head-cold, pain reappeared and discharge ceased. Two days previous to admission a swelling was seen over the mastoid. About the same time child became much sicker.

She has had at no time chills, nausea, or vomiting.

Examination: Shows a child fairly well nourished, lying upon her right side, head markedly retracted, legs flexed on thighs, face flushed, eyes closed, mouth open, patellar reflexes absent, Kernig's marked. The heart, while fairly strong when patient is lying down, becomes irregular and weak during exertion. She answers questions intelligently but slowly, and sometimes requires several efforts before she is able to finish her sentence. She protrudes the tongue fully but with some hesitation and unsteadiness.

Temp. 102.8°. Pulse 140. Resp. 24. Leucocytes 17,000.

Local examination:

Right ear. Shows effect of a previous suppuration.

Left ear. External auditory canal filled with foul cholesteatome and pus. Lumen of canal

*Read before the Forty-third Annual Meeting of the Michigan State Medical Society, Saginaw, May 15-16, 1907, and approved for publication by the Publication Committee.

narrowed by pressure from mastoid. Over the lower half of the mastoid is present a smooth swelling, very sensitive to pressure and showing slight fluctuation. This swelling extends beneath mastoid tip into the deep neck muscles.

A diagnosis of chronic suppurative middle ear disease with cholesteatome and meningitis was made and a bad prognosis given. Careful questioning of the mother showed that the child had begun to complain of headache only the day before and that all her bad symptoms had come on suddenly. Therefore it might be supposed that her meningitis had begun within the recent few hours, had come on suddenly, was progressing rapidly, and might at that time be confined to an area that could be reached by operative measures. The writer could recall five cases of purulent otitic meningitis operated upon successfully in his practice and therefore felt warranted in suggesting an operation as the only possible means to offer even the slightest chance of recovery. The child was therefore immediately prepared for operation.

Under ether anesthesia the usual mastoid incision was continued down over the area of swelling in the neck and several drachms of foul pus and cholesteatome were allowed to escape. Perforation through the inner surface of the mastoid tip had taken place on to the deep muscles of the neck. The mastoid cortex was completely removed and the mastoid cavity found of moderate size and filled with a true cholesteatomatous tumor, having a well-defined limiting membrane. This membrane had ruptured and allowed the escape of its fluid contents. Careful removal of the tumor showed the bony wall of the inner table destroyed by the disease, so that the cerebellum was exposed over an area about the size of a silver dollar. Over this area the membrane of the cholesteatoma was firmly adherent to the brain.

The dura was in part covered with foul purulent granulations. These were removed and the brain uncovered until healthy dura was uncovered on all sides except over a small area near the median line. The reason for not going further in this direction will be explained later. The lateral sinus was found uncovered for a distance of about an inch and a half but its lumen had not been invaded. The horizontal semicircular canal had been destroyed and the labyrinthine vestibule opened. A large amount of pus was secured from the posterior cerebral fossa. All pneumatic structure infected was then removed, in-

cluding the mastoid tip, the posterior root of the zygoma, and the wall of the external canal, thus converting the middle ear, canal, and mastoid into one cavity with smooth walls. The tympanic end of the eustachian tube was then curetted in order to secure its future closure and a counter opening made in the neck for drainage. At this point, in spite of hypodermic stimulation of hot saline enemata, repeated during operation, the patient showed signs of collapse. Further operating was postponed and the patient returned to bed where she made a good recovery from the anesthetic.

9. P. M. Patient was perfectly conscious but restless. She answered questions satisfactorily but slowly. Protrusion of the tongue showed paralysis of the left half of the tip. Opisthotonos became more marked.

5-9-07. On account of the great amount of pus found within the cranial capsule the wound was dressed on the following day and found perfectly clean. Local condition of the brain was better.

5-10-07. She suddenly became comatose and died.

Autopsy: Dr. Rous: The pathological changes of greatest interest were seen in the brain and spinal cord.

Brain: Dura slightly tense over cortex. Pia congested, left more than right. Slight milky exudate over left temporal lobe. Several drachms of milky exudate over base. All basilar structures matted together by plastic exudate. Over left cerebellum corresponding to field of operation and firmly attached to pia is a true cholesteatome membrane, following rupture of which escaping pus reached the base of the brain. Lateral ventricles both contained some fluid, left being considerably distended. Both choroid plexuses congested.

Cord: The chief change consisted in the presence of two or three drachms of milky fluid within the arachnoid. At time of autopsy this was found in the lower and lumbar regions.

The aorta showed a beginning sclerosis probably the result of the chronic suppuration.

The temporal bone shows the destruction of the horizontal semicircular canal.

As the clinical history, borne out by autopsy, is absolutely clear, let us outline it briefly from its beginning thirteen years ago. In the first place this patient

was an adenoid child and on this account particularly predisposed to the diseases of childhood. She contracted scarlet fever when one year old. The condition of her throat made infection of the middle ear easy. The tympanic membrane was permitted to rupture without paracentesis. Extensive involvement of middle ear structures took place before pus escaped. Rupture of the tympanic membrane from pressure of pus caused so much destruction of the membrane that the perforation remained patent. Through this patent perforation the epidermis of the external auditory canal grew into the tympanum, invested its walls and extended backwards into the mastoid cavity. This was taking place slowly without symptoms throughout the child's early life. This epidermis, like epidermis in other parts of the body, must desquamate. The result was a tumor mass composed of desquamating epidermis and pus, gradually increasing in size until the pressure of it against the bony wall of the mastoid resulted in destruction of the inner table and exposure of the brain. The disease process thereupon fastened upon the dura and destroyed it. It next attacked the arachnoid and pia. Meanwhile the limiting membrane of the mass became firmer, so that further progress in that direction was temporarily arrested. During this time the horizontal semi-circular canal was destroyed and labyrinth invaded. As is usually the case when they come on slowly, all these pathological changes occurred without symptoms. For many months or even years the child had been going about with the labyrinthine vestibule filled with pus and the brain covered with a stinking infected tumor.

This was her condition up to within two weeks of her admission to the hospital. At that time she caught a severe head cold. The inflammation of the nasal mucous membrane spread through the Eustachian tube to the tympanum

where it caused an acute otitis, blocked the perforation in the tympanic membrane, and so prevented the escape of pus from ear and mastoid. The pressure within the mastoid increased for twelve days, when rupture into the neck took place. The resulting swelling brought the parents to a realization of the fact that something was wrong. On her way to the hospital rupture of the limiting membrane of the tumor into the posterior cerebral fossa occurred, with an immediate and extensive meningitis of the base.

Let us consider the errors in treatment that led to this fatal condition.

First—Had the adenoids been operated when the child was an infant it is quite probable that she would not have contracted her scarlet fever which caused her suppurative ear.

Second—Had an early paracentesis been done on her ear during its acute inflammation and proper treatment instituted the ear would not have become chronic.

Third—Later, after the ear had become chronic, if properly treated or operated, the meningitis could have been prevented.

Fourth—Finally after the meningitis had been set up, if an immediate operation had been performed she might have been saved, for in the writer's experience an otitic meningitis, unless it has extended so far that healthy dura can not be uncovered on all sides of the diseased area, can frequently be operated successfully. In this case it is altogether probable that an operation performed 24 hours earlier would have resulted differently.

This case is one of a large number that justifies the following conclusions:

First. Adenoids are one of the most important predisposing factors in causa-

tion of diseases of childhood and of suppurative ears.

Second. All suppurative ears and especially all scarlet fever ears should have early paracentesis.

Third. All acute ears should receive

proper treatment in order that they may not become chronic.

Fourth. All chronic ears must be considered as a menace to the life of the patient and should receive proper treatment or operation.

ACUTE MASTOIDITIS.*

CALVIN R. ELWOOD, M. D.,
Menominee.

The writer was called in consultation, a short time ago, to see a patient who had been suffering for about one week from an attack of acute suppurative otitis media, which, notwithstanding its short duration, was complicated with serious involvement of the mastoid cells. The physician's diagnosis was so manifestly correct, that the mastoid operation was immediately performed. Every cell from the tip to the root of the zygoma, and back to the wall of the lateral sinus, was filled with pus, and had nature not been assisted, that abscess would certainly have ruptured within a very short time, on account of the virulent character of the infection, and if, perchance, into the cranial cavity, with fatal result. The happy termination of this case was due not to any special surgical technic, but to the prompt diagnosis made by the attending physician, and it is with the desire of emphasizing the importance of the prompt recognition of these cases that this paper is presented.

When one considers the enormous amount of pus discharged from some suppurating ears, in comparison to the

very limited capacity of the tympanic cavity proper, it is apparent that those cells of the mastoid nearest the middle ear are involved in many cases of severe suppurative otitis media, although edema of the lining mucous membrane happily prevents an extension of the infection in the majority.

If, instead of considering the tympanic cavity as a separate structure, communicating through the aditus ad antrum to another closed cavity, the mastoid, we would consider the tympanum as beginning with the pharyngeal end of the Eustachean canal (as Pierce has suggested) and terminating with the last and most remote pneumatic space of the temporal and occipital bones, we would give all our cases of acute suppurative otitis media more attention, and be ever on the alert for mastoid symptoms.

The close communication between the tympanic cavity and mastoid cells may be demonstrated by the fact that, by pouring lead into the middle ear of a cadaver, a cast of the entire mastoid may be obtained.

The surgical anatomy of the region is familiar to us all. The complication most dreaded is rupture into the lateral

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sinus or middle cranial fossa through walls, the thinness of which is demonstrated by the prepared skull. The surgical accident most liable is injury to the facial nerve, or entrance through malposition of the sinus. The pathology, in the vast majority of cases at least, is the extension of a suppurative process from the middle ear.

In the consideration of a disease in which prompt diagnosis is of such vital importance, the symptomatology is of especial interest, and may be epitomized as tenderness on pressure, sagging of the posterior superior canal wall, and nocturnal pain, all doubly suggestive when associated with lessening of the discharge from the middle ear. Tenderness over the mastoid is an important symptom, but its significance depends upon the conditions under which it occurs. Tip tenderness may be elicited in almost every severe case of acute suppurative otitis media, and is therefore not to be seriously considered early in the disease, especially if not associated with severe pain, septic temperature and scanty discharge. The whole mastoid region may be tender, or there may be certain rather clearly defined tender points, as over the antrum, the mastoid emissary vein, or the tip of the mastoid. In view of the fact that the suppurative process extends through the antrum to the mastoid cells, it would be expected that this region would first be sensitive to pressure. If the tender spot should be first over the antrum and subsequently extend to include the tip, it would strongly suggest extension, and often sufficiently grave to demand surgical interference.

The significance of mastoid tenderness as an indication for surgery depends very much upon attendant circumstances. Tenderness may be a very pronounced symptom during the first forty-eight hours of a severe acute suppurative otitis media associated with

free discharge, accompanied by little pain or fever, and cause little anxiety. Under such conditions there is sufficient drainage, little evidence of sepsis, and the process has been of too short duration to cause especial alarm. If, however, the same amount of tenderness be present during the sixth or seventh day of the disease, be aggravated by a lessened discharge from the external meatus, and associated with a deep boring pain, particularly severe at night, it would suggest a mastoid infection so grave that surgical interference would probably be necessary, as the latter conditions would indicate extension of the disease to the deeper structures. In testing for mastoid tenderness, great care must be exercised not to confuse it with tenderness in the canal from furunculosis, the disease from which it is most frequently to be differentiated. Confusion is avoided by exerting the pressure upward, inward, and backward, thereby avoiding any movement of the external auditory canal. If such movement of the external meatus is avoided there would be no increased tenderness if the symptoms were caused by a furuncle. In deciding the significance of this symptom both mastoids must be tested, as some patients normally have very sensitive mastoids. Again it must be borne in mind that it is the pain on *deep* pressure that is significant, and if the characteristic pain is present, neither the stoic nor the hypochondriac will mislead you. The pain is severe, deep seated, and unmistakable.

Together with tenderness over the mastoid, the most important symptom is sagging of the posterior superior canal wall. The mastoid cells are separated from the canal by only the bony meatus, and if distended with pus will crowd down the wall at this point, presenting this important diagnostic sign. Dench states that in his extensive experience he has not opened a mastoid

when this symptom was present that he did not find pus.

Some time ago a case in my own practice demonstrated very forcibly the value of this symptom.

The patient, a nervous, sensitive child, had severe suppurative otitis media following the measles. A few days after the second ear began to suppurate, the characteristic sagging within the canal, although slight, was present. In this case tenderness on pressure was of no value, for the child insisted it hurt to press either side of either ear; temperature was insignificant and was of little value on account of the measles. The child made a slow recovery until a slight exposure brought on recurrence of the discharge. I then asked for counsel, my only reason being the chronicity of the disease and the sagging of the canal, but surgery was discouraged. The case subsequently came to operation, and the mastoid cells were found so extensively broken down, that the lateral sinus was exposed in the removal of necrotic tissue.

In this case it would have been a radical operator indeed who would have insisted on surgery in the early stages of the disease—indeed it was discouraged by an aurist of national repute. Still the rule of Dench held good, the sagging of the posterior superior canal wall close to the tympanic membrane meant pus, and pus was found when the mastoid was opened.

Conversely the only mastoid I ever opened, in which I did not find pus, presented most of the other symptoms of mastoid suppuration, but no sagging in the canal. This case was so intensely interesting to me, that I trust you will not be wearied with a brief resume of the history.

I first saw a Sister in the local hospital during the fourth day of her illness. Temperature was 101°, with severe headache and pain in the mastoid region. There was pronounced tenderness on deep pressure over the antrum but no impairment of function, evidence of suppurative otitis, or sagging of the canal. During the succeeding five days temperature ranged between

100 and 102.5, the pain in the mastoid region became very severe, and tenderness on deep pressure was unmistakable by all methods of exclusion. An exploratory operation was now suggested and accepted. The mastoid cells were freely opened and found normal with the exception of being filled with a serous fluid. The wound repaired in about one half the time of an ordinary mastoid operation, the hearing was not impaired in the least, and there was complete relief from symptoms. During the patient's convalescence she was treated for gastric ulcer and this condition may account for the temperature.

I do not attempt to make a diagnosis in this case—a serous or catarrhal mastoiditis is not mentioned in the literature at my command, although a professional friend of large experience advises me that he has operated a similar case with similar result. At any rate, the opening of the mastoid gave relief from symptoms which had become unbearable, and without any unfavorable results.

The study of the temperature in acute mastoiditis is misleading, especially in adults, as an indication for surgical interference. Whereas the temperature is usually elevated and of a more or less septic character, yet many cases of severe mastoid suppuration are reported in which there was none or very little fever. In children, however, the temperature is usually decidedly elevated.

The above symptoms are always important, but doubly so when associated with sudden cessation of the discharge, which indicates serious interference with the drainage of the mastoid cells. In such a case delays are dangerous. We know pus is forming and we know it is not draining through the ear as it should. In such a case something may happen and happen soon. Pus under such circumstances is imprisoned within the mastoid cells, otherwise the symptoms would not be increased coincident with lessened discharge.

When this occurs the probabilities are very strong that the imprisoned pus will

break its bounds, escaping either under the periosteum upon the surface into the digastric groove, to filter thence down into the cervical tissues with varied results, all annoying and some truly dangerous, or the pus may rupture into the cranial cavity. When one considers how thin the inner table of the skull often is in proportion to the outer, is it not indeed remarkable that this distressing and usually fatal termination does not more frequently occur?

Should a profuse suppurative otitis media persist for over four weeks with no sign of abatement, notwithstanding careful treatment, many operators advise drainage through the mastoid, although other evidences of trouble are absent, and numerous cases of fatal termination under these conditions, without surgery, as well as the discovery of extensive involvement of the mastoid cells when opened, are reported.

While I would be very careful about advising such a procedure, through fear of being considered too radical, it is the advice I would want were I the patient. Such an obstinate and profuse discharge would not exist with proper drainage, and improper drainage under such conditions is dangerous. Besides, the prognosis as to time of recovery would be better after surgery, and prognosis as to function much better.

The bacteriologic examination of the discharge is frequently of value, although it occupies the place in otologic practice that *Pilgrim's Progress* does in literature. "That beautiful book that everybody praises and nobody reads." Such examination is attended with difficulties, as it is very difficult to obtain an uncontaminated specimen of the discharge, and only teaches that should the infection be streptococcus we must be especially on our guard, as such infection is most destructive.

Dr. A. H. Andrews suggests two interesting confirmatory tests with the

transilluminator and stethoscope. He places the transilluminator on the mastoid and an aural speculum in the canal, and finds the transmission of light reduced as compared with the opposite side, when pus is present in the mastoid cells. Again with a special bell, $\frac{5}{8}$ of an inch in diameter, with the stethoscope placed over the mastoid tip, the vibrations of a tuning fork are heard more distinctly and longer, if the mastoid cells are filled with pus or granulation tissue, than when normal.

During my first year in special practice, I had a case in which suppurative otitis media and facial paralysis were the only symptoms of mastoiditis. I incised the tympanic membrane, got free drainage, and my patient was comfortable, but the paralysis continued. Later, a tumor appeared back of the ear, and even then I did not read the case aright. I confessed my weakness, the patient consulted our former president, who opened the mastoid, relieved the pressure on the facial nerve, and the patient got well. I wouldn't make that blunder again, but mention the case as some of the books state that facial paralysis is not a complication of acute mastoiditis. It very seldom is, but certainly was an impressive one to me.

The diagnosis must often be made with by no means all of the above symptoms present. There is usually a history of suppurative otitis media, of from a few days to weeks duration. The discharge has diminished coincident with increased pain of a deep boring character, worse at night, disturbing sleep. Examination of the canal will show sagging of the posterior superior wall as above described, and tenderness on deep pressure will be elicited. The auditory function is as a rule greatly impaired. The patient has an anxious look, the tongue is furred, and the bowels constipated, temperature, pulse, and general condition suggest sepsis.

We must not wait for fluctuation of the tissues over the mastoid, which is indicative of neglect on our part as the abscess has ruptured—fortunately for us externally instead of into the cranial cavity.

Mastoid abscess may develop without any symptoms of suppurative otitis media. I was recently called in consultation to see a child of five years, with a fluctuating tumor behind the ear, who had had no earache, and whose hearing was excellent. Incision of the tumor evacuated a quantity of pus, but, inasmuch as middle ear and septic symptoms were absent, I did not open the mastoid. A few days later the tympanic membrane ruptured spontaneously with copious discharge. A free incision of the membrane was then made and after a few days all discharge had ceased. This was an unusual course, but probably explained by the fact that in the child there are often only two mastoid cells, the antrum and that in the tip. The tip was most seriously infected and the abscess ruptured at this point. The cells being few and freely communicating, the opening here and in the membrana tympani furnished sufficient drainage.

Should the middle ear and mastoid symptoms follow an attack of la grippe, measles, or scarlatina, we must be particularly alert, as in these cases the destructive process is rapid.

The differential diagnosis is easy, the only condition with which it may be confounded being furuncle in the auditory canal, from which it may be differentiated as follows:

In mastoiditis the discharge does not relieve the inflammatory symptoms, in furunculosis the discharge gives great, often complete, relief.

In mastoiditis, external inspection is negative until late in the disease, and there is sagging in the posterior superior quadrant of the canal close to the mem-

brana tympani, the outer $\frac{2}{3}$ being normal. In furunculosis redness, swelling, and edema within the canal and close to the auricle, are often present, while the deeper structures are normal.

In mastoiditis, the ear drum is usually easily inspected, and a perforation may be detected from which pus may be drawn with the pneumatic speculum. In furunculosis, view of the tympanic membrane is often impossible on account of the swollen condition of the canal, but if seen it is intact.

In mastoiditis, deep pressure on all points over the mastoid is painful, but simple movement of the auricle is not. In furunculosis, pressure over the mastoid by the method described above is not painful, while movement of the auricle is intensely so.

Having made a diagnosis of acute mastoiditis, what are we going to do about it? First, drainage through the middle ear must be the freest possible. If there is any question on that point, a free incision of the drum membrane should be made—not a paracentesis, as the puncture is obsolete and deservedly so, but a good free incision, best under nitrous oxide anesthesia, for it is painful. The knife may be withdrawn so as to incise the superior posterior canal wall for about a quarter of an inch. Efficient drainage should be maintained, the ear frequently cleansed, the bowels freely opened, diet restricted, and the patient put in bed with a Bishop ice-bag over the mastoid. The ice-bag is of value as a diagnostic as well as therapeutic measure. If it increases the pain, it would suggest that the pain was in part at least, of neuralgic or rheumatic origin. Norval Pierce objects to it on the ground that it may excite rheumatic pains in the sterno mastoid, thus complicating the symptom complex. In mastoiditis, the ice-bag will partly check the inflammatory process, giving the medicine man's best friend and silent

partner, Nature, some advantage in her battle with the bugs. It will quiet the patient's pain and give him needed rest.

The ice-bag, to be of service, must be an ice-bag all the time, not part of the time a poultice of half warm water, but the bag must be refilled night and day, as soon as the ice melts. It must not, however, be used too long, forty-eight to seventy-two hours being the limit of safety, preferably the former. The relief experienced may create a false feeling of security, and the delay furnish opportunity for serious extension of the destructive process.

The method of draining the middle ear depends upon the character of the discharge. If it be semi-fluid in character, gauze drainage is the best, inserting a wick of iodosyl gauze well against the drum membrane, taking care not to pack the canal too tightly, and fill the concha with absorbent cotton. This should be changed twice daily, as the saturated wick is harmful. A little boric acid, xeroform, iodosyl, or similar powder may be blown into the ear to combat the excoriating effect of the discharge on the canal wall, but care must be taken not to insert sufficient powder to dam back the discharge.

If, after continuing this treatment for a few days, the condition not only does not improve, but grows worse, especially if symptoms are associated with diminution of the discharge, further delay is unwise, and the mastoid cells should be opened.

Don M. Campbell reports some very satisfactory results from serum therapy after the method advised by Wright and Douglas, but he uses it only to assist nature, as surgical drainage is the vital and first desideratum. Under modern conditions this is not a particularly dangerous operation, and in doubtful cases, where suppuration has persisted in spite of energetic treatment, and where symptoms suggestive of mastoid

involvement are present, the operation is justifiable as an exploratory procedure.

The prognosis after operation is good, if surgery is not too long delayed; the discharge from the external canal should disappear promptly, function is better than in those cases of protracted suppuration which have been left to the tender mercies of the Lord and the syringe, and the danger of chronic supuration, with its attendant disgusting and distressing symptoms, is avoided.

The technic of the operation will be considered briefly. After proper preparation of the patient, operator, and assistants, the external incision is made, beginning at the mastoid tip and extending upward, following the posterior border of the auricle, and leaving just enough room for the insertion of sutures. Some operators also make a posterior flap, to better expose the field of operation. The mastoid tip should be carefully freed, so that the finger can be passed around it, and the periosteum should be deflected, so as to preserve it for the subsequent dressing. In chiseling, it must be borne in mind, that the position of greatest safety is as close to the posterior canal wall as possible, that above the zygomatic ridge lies the middle cranial fossa, and that the antrum lies wholly or in part in the supra meatal triangle, which is formed by the lower margin of the zygomatic ridge, and the superior posterior border of the external auditory canal. The safest procedure is to chisel a groove parallel with the long axis of the mastoid, and close to the posterior margin of the bony canal, which will frequently bring pus. If possible, the chisel should now be laid aside for the curette and rongeur. Careful consideration of the anatomy of the region will usually save the lateral sinus from injury, and if the operator keeps close to the posterior margin of the bony canal, until his explorations show extension of the opening to be

safe, no trouble will result.

If the mastoid be round and narrow, the sinus may be so far forward that it is very difficult to avoid injury, and for this reason progress must be with great caution. If the operator does not go above the lower border of the zygoma, there is no danger of wounding the dura. The entrance of the antrum furnishes a valuable guide for our subsequent procedure, and is recognized by the insertion of a bent probe, which, passed forward and inward, is felt to enter a cavity of considerable size—the middle ear.

With the exposure of the antrum some operators, and I think nearly all during their earlier operations, are willing to consider the operation ended; but this is an error which will delay the healing process and lessen the ultimate functional result. The cells of the tip should now be obliterated. In my last operation the tip was investigated after the operation might have been considered finished, and in it was found a large cell filled with pus, which if neglected would have greatly delayed healing. The writer confesses to a disposition to let well enough alone at this point, but if we would profit by the brilliant results of Allport, Whiting, Dench, and others who obliterate the entire process, even to the cells at the root of the zygoma, we will save ourselves anxiety, and our patients time and discomfort. We should thoroughly cleanse the process of necrosed bone, leaving the wall of the lateral sinus a practically smooth surface, and the antrum a rather shallow cup.

Dr. G. F. Cott, at the last meeting of the American Academy of Otolaryngology, discouraged opening the antrum in acute cases, when discharge from the ear had stopped, claiming that evacuation of the pus on the cortex and in the cortical cells was all that was necessary, if the deeper cells appeared free from

pus. It is difficult to understand the logic of this reasoning, as the usual, indeed, almost invariable avenue of infection, is through the antrum from the middle ear. The objections to opening the antrum are insignificant, whereas neglect to do so may seriously interfere with an ideal result. It is, however, unwise to too vigorously curette the aditus ad antrum, as by so doing it is possible to disarticulate the incus, should the curette enter the middle ear.

In the after treatment authorities differ greatly. Bryant, Reik, and others at present advocate closing the wound, and letting the cavity fill with blood clot, claiming thereby to greatly shorten convalescence and lessen the deformity (but the clot is prone to break down). Ballenger, Beck, and others, applying the lessons learned at the surgical workshop at Rochester, employ a modification of cigarette drainage, and Whiting lines the mastoid cavity for the first dressing with a perforated rubber tissue before inserting the gauze, but this should be changed in 24 hours. While it is changed with much less discomfort, the surgeon regrets exceedingly to disturb a patient, so soon after having undergone so serious an operation.

The old reliable method is to insert the tip of a narrow strip of drawn iodoform gauze well into the antrum, and lightly pack the remainder of the cavity. If either sinus has been exposed it should be especially protected with a separate wick. The dressings are usually changed about the fifth day, the after treatment being in accord with accepted surgical principles. The only case in the writer's somewhat limited experience, in which a fistula remained and in which subsequent curettement was indicated, was permitted to heal too rapidly, and in the future he will be sure that the wound heals from the bottom.

Prognosis as to life and function are

greatly improved by the operation in cases in which it is indicated. The disease is always a menace to life, the operation seldom, although a radical surgical procedure not to be entered upon unnecessarily, but when properly

performed before intracranial complications have developed, will greatly improve the chances of recovery for a patient suffering from the most dangerous complication of acute suppurative otitis media.

TREATMENT OF DIABETES MELLITUS.*

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Detroit.

(From the Medical Clinic of Professor George Dock, Ann Arbor.)

Probably no subject in medicine is more universally written about, discussed and investigated than diabetes mellitus. The laboratory worker finds it a field for endless research, to the clinician it suggests every changing dietetic and therapeutic problems; while the general practitioner sees it often as a hydra-headed monster—difficult of accurate observation, presenting new complications after one phase has been successfully dealt with, and occurring with annoying frequency in patients whose habits of life and appetites are not readily controlled. For no one disease have more remedial agents been suggested and more patent nostrums exploited. It rivals in this "the cures" for "bronchial troubles" and "rheumatic affections" that frighten many of us into using drugs and resorting to methods that in a few cases have proven absolutely harmful, and in most instances, totally ineffectual. The sooner we learn that the treatment of diabetes is a dietetic problem—a problem in metabolism—that much sooner we shall become competent of judging the condition of each patient and of intelligent-

ly treating him. To know that a small amount of sugar in the urine is compatible with health is one of the first facts that we must become acquainted with. To understand that no individual can subsist on a carbohydrate free or strict diet must also be learned. Finally, to study each particular case as a new problem, is the third and essential fact that we must observe, if we intend to give our diabetic patient proper attention.

The simplicity of the diagnosis of diabetes by the qualitative test with Fehling's solution requires no comment. Still I would urge that it be carefully done on all urines, and in many instances be fortified by the fermentation test. For when the Fehling's test is improperly carried out, other substances than glucose will reduce the copper. The quantitative methods of estimation concern us most, for it is by these alone that we are able to observe the progress of our cases from day to day, and determine their course of treatment. It is essential, while impressing upon the patient that he must co-operate with you, that a daily twenty-four-hour mixed sample of urine is requisite and indispensable. This should be carefully collected in a clean vessel, accurately meas-

*Read at the Saginaw meeting of the Michigan Medical Society and approved for publication by the Publication Committee.

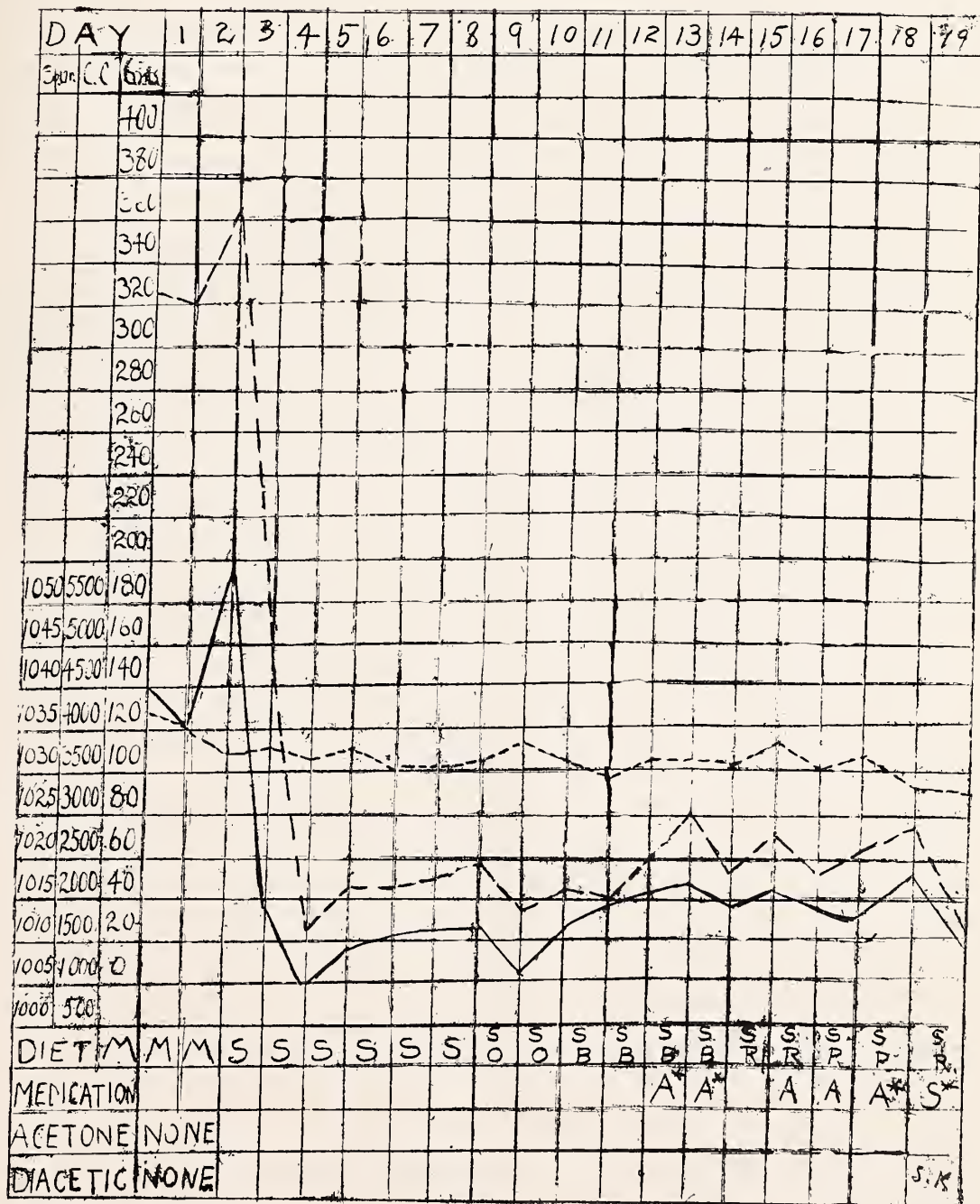
ured and procured either in part or whole by the physician. Many practitioners still employ the Fehling or Purdy solutions for a quantitative estimation. This is laborious and time-consuming. The fermentation methods are simpler, more easily conducted and when a few details are observed, give entire satisfaction. Einhorn's method is fairly accurate. Lohnstein's specific gravity test is minutely accurate within certain limits. Both of these methods, however, can be supplanted by a test first described by Roberts. It is easily performed, requiring no special apparatus and accurate for all practical purposes. Its simplicity, few requirements for performance and relative constancy of its results, makes it a method that I take to be worth while repeating at this time. All the instruments needed are the property of every practicing physician. They are a good urinometer, a few flasks, a warm room and a cake of yeast. Two specimens of a twenty-four-hour urine are placed in flasks, in one a few cc. of chloroform are poured to prevent bacterial fermentation. In the other a piece of yeast the size of a bean is thoroughly stirred. Both flasks are then stoppered with cotton and set aside in an incubator or warm room, not above body temperature, and allowed to ferment for twenty-four hours. If at the end of that time all sugar has disappeared by the Fehling's test, both samples are filtered into clean tubes and their specific gravity estimated. Of course, the fermented sample will be of lower specific gravity than the unfermented. Their difference will be indicative of the additional density of the unfermented urine. Multiplying this difference, by the factor 230, the per cent of sugar in the urine will be determined. The percentage of sugar times the quantity of urine passed in twenty-four hours, gives the total amount of glucose excreted in grams.

For example: 2000 cc. of urine. 1032 specific gravity before fermentation; 1022 after. $1032 - 1022 = 10$; $.230 \times 10 = 2.300\%$. $2000 \times 2.3\% = 46.000$ grams.

I can think of nothing simpler than this method. I have compared it in a large series of urines with more laborious and exact methods and never found it to vary more than .2%.

It is not my purpose to review the etiology of diabetes, nor speak of the many forms that have been classified according to its unsettled pathology. However, in order to fully understand and intelligently treat any case, a clinical and physiological classification is essential. It is on this basis that the practitioner must make his diagnosis. To many, a mild and a severe form has been sufficient, but slightly more exact division according to our knowledge of the changes in sugar and tissue metabolism seems necessary. To elucidate this the explanation of a few physiological facts is requisite.

Ingested carbohydrates are changed to the hexoses, mostly glucose, during digestion and absorption. They then enter into a loose combination with the albuminates of the blood remaining normally at the ratio of 1—1000. By some process, the exact nature of which we are at present unaware, this glucose is again built up—polymerized into glycogen—animal starch, which is stored mostly in the liver and muscles. The failure to bring about this synthesis or a breaking down of this glycogen may cause an excess of sugar in the blood, that is, a hyperglycemia results. Now, when glucose is present in the blood at a ratio of more than one in one thousand, the excess is excreted by the kidneys. In other words, glycosuria results. If this glycosuria is due to an increased ingestion of glucose above the normal limit (which is 200 grams) then alimentary glycosuria, which has no pathological or clinical importance, en-



sues. When, however, starch ingestion is followed by a failure in those processes to act that will cause a proper building up to and storing up of glycogen, the first type of diabetes, the mild form, results. In these a slight or total reduction in starch ingestion causes the sugar to disappear from the urine. The next grade of diabetes is that in which the storing of sugar as glycogen is not only interfered with, but the breaking up of the glycogen in the body into sugar is progressing. This is the moderate grade. In the severe forms, sugar is also derived from a destruction of the proteids. The catabolic processes which lead to this are preceded by a destruction of the fats. The breaking down of proteids leaves certain intermediate products in the blood whose nature is destructive in the organism. These organic chemical oxidation products are acetone, diacetic and beta-oxybutyric acid. They cause the dreaded acidosis in all severe forms of diabetes.

With this brief classification we have a foundation with which to begin our examinations. Each patient, as I previously stated, becomes an individual study, a physiological problem, a case for dietetics, a metabolic enigma. He demands first of all an accurate determination of sugar excretion on ordinary mixed diet; secondly, an experimental investigation of the quantity of sugar excreted on strict carbohydrate-free diet; thirdly, the determination of the variability in sugar excretion brought about by the ingestion of the known amounts of several different carbohydrates;

fourth, the administration in severe cases of certain drugs that will reduce the intense catabolic processes and thereby reduce the sugar and prevent acid formation and intoxication.

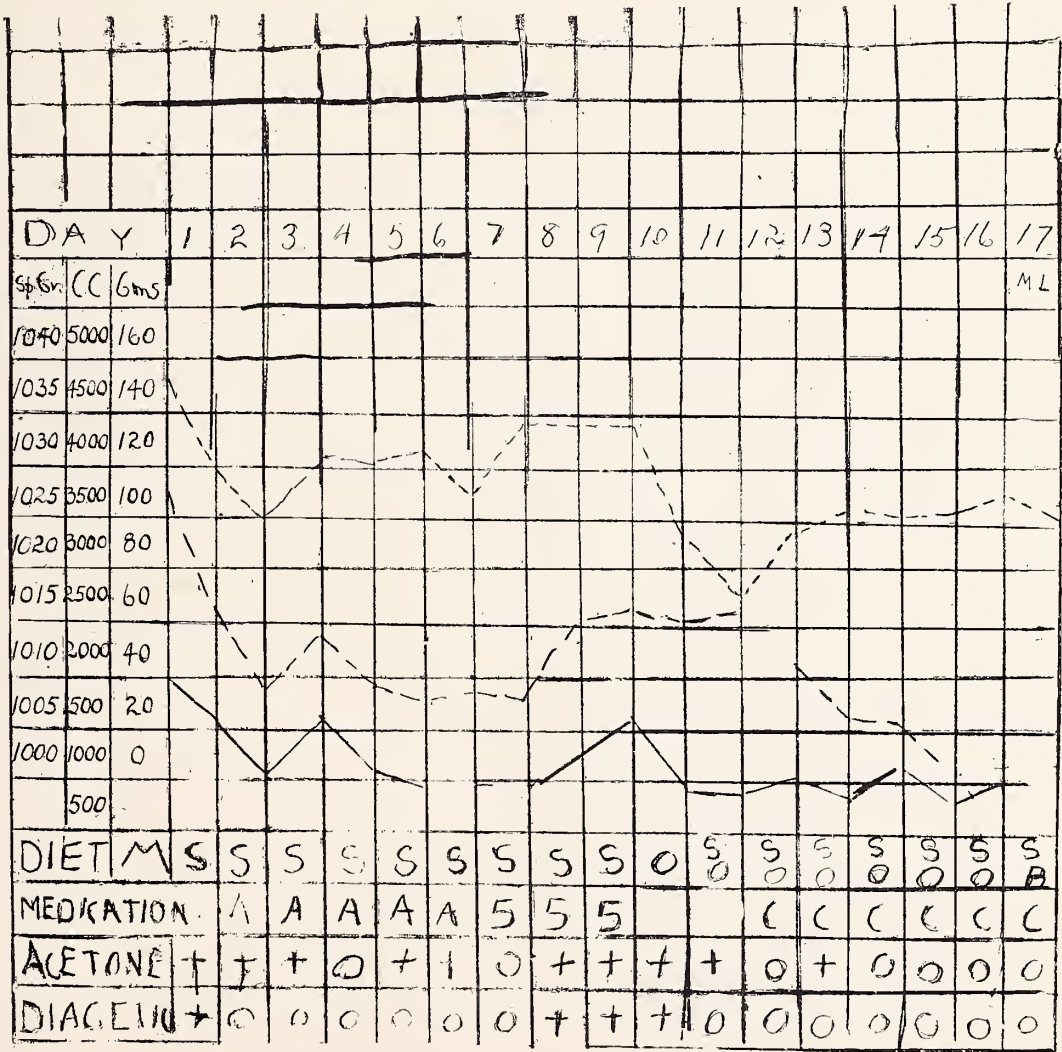
The necessity of knowing just how much sugar a patient excretes on a known mixed diet is apparent to all. This is our starting point, and from it we can govern our future methods. To know whether or not a patient excretes sugar on a strict diet, settles whether or not that patient has a mild or moderate case of diabetes. It is at this point that our active treatment of a case begins. After reducing the sugar to a minimum on strict diet, it becomes necessary to add carbohydrates to the diet, trying first one starch and then another, and as the sugar excretion does not materially increase and the patient continues to improve adding carbohydrates one by one to the dietary. Strict diet is incompatible with health and if persisted in is harmful. The reason for this is simple. We are all aware of the fact that for the health of the human organism, the nitrogen excreted in the urine must be equalled by the intake of nitrogen in the food, a nitrogen balance is essential. In a pure proteid and fat diet, the amount of heat furnished by as much of these foods as can be comfortably ingested is low. The heat units or calories that a normal body needs must be maintained. An increased amount of proteid food can be taken for a while, but sooner or later, varying with the individual, the tissue proteids are attacked. Now, a destruction of tissue proteids must be prevented, not only because of the loss to the body, but because of the acetone bodies that are formed. These acetone bodies, however, are small in amount, in comparison to those that are formed from the destruction of tissue fat that always precedes a destruction of tissue proteids. Thus, associated with a low sugar excretion,

KEY TO CHARTS.

Short Dash—Specific Gravity.
Long Dash—Grams of Sugar.
Solid Line—Cubic Centimeters.
M—Mixed Diet.
S—Carbohydrate Free Diet.
O—Oatmeal.
B—White Bread.
R—Rice.
A*—Antipyrine.
A—Aspirin.
S*—Salicylic Acid.
C—Codein Phosphate.

intoxication with its dangerous symptoms is not an impossible or even uncommon sequel. To prevent this breaking down of tissue fats and proteids, to support the body heat, to maintain our nitrogen equilibrium, only an addition will prevent acetonuria, at the same time keeping sugar excretion at a minimum. Eight to one hundred grams of starch taken daily has proven sufficient for this purpose.

It will now be plain to all that after



of nirtogen free constituents to the diet will satisfy the demand of the body. That is, to supply the requisite number of calories, the addition of carbohydrates to the strict diet becomes indispensable. It seems, therefore, that the presence of a small amount of starch in the food the sugar has been reduced to a minimum by strict diet, the addition of a small amount of a definite starch is desirable. It makes no difference what carbohydrate you begin with, though experience has shown us that certain starches keep sugar excretion lower

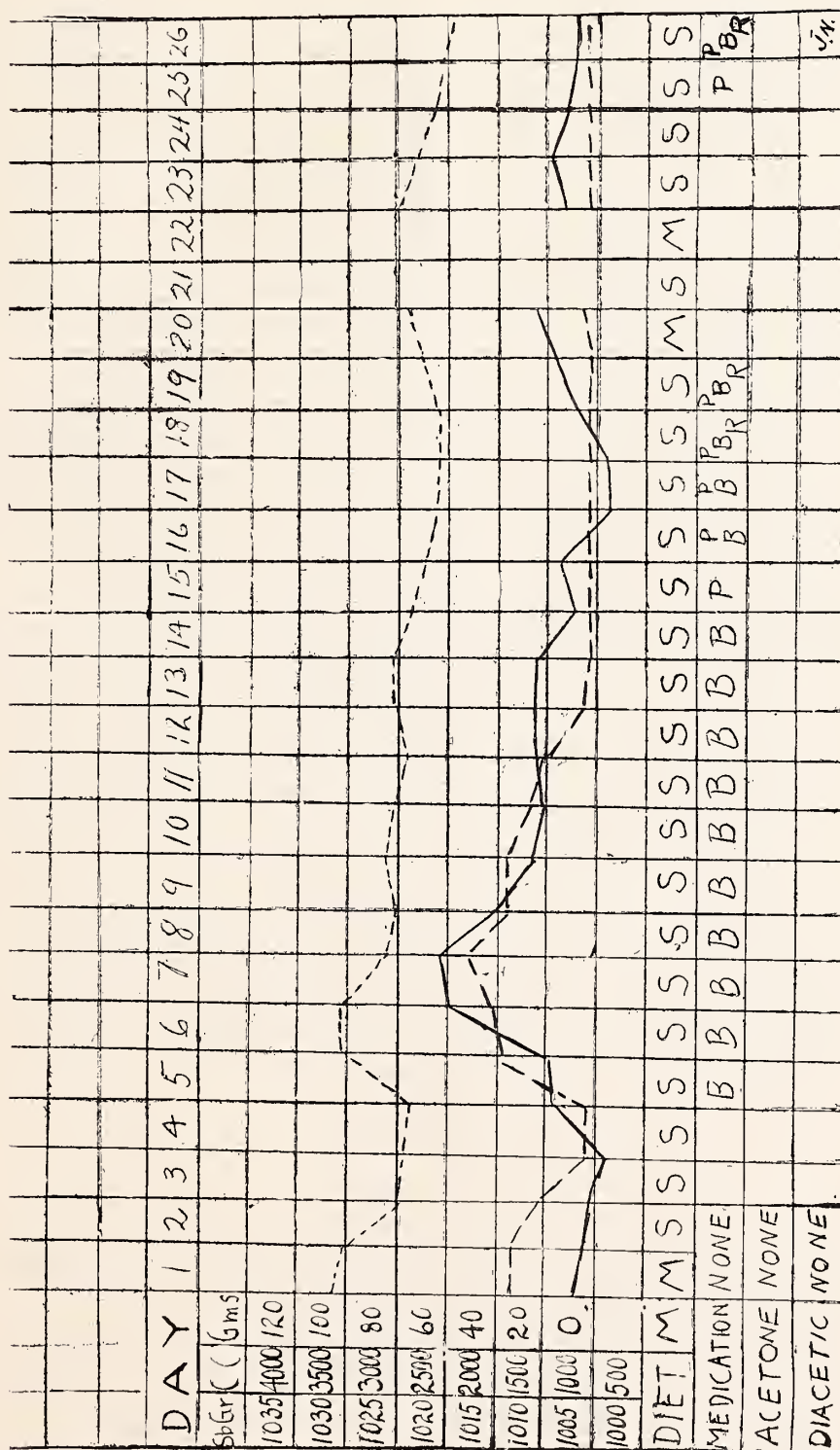
than other. Oatmeal is one of these. Here the personal equation again comes into the foreground. The practitioner has to continue his urinary observations along with his dietetic experiments. In a short time the physician finds out that certain carbohydrates keep the sugar in the individual case lower than others. In fact, frequently the sugar excretion, while the patient is on one carbohydrate, will progressively diminish. In other words, he becomes tolerant to that starch. This is a big gain for the patient. Immediately the physician should seek another starch to combine in small quantities with the one that has done its work so efficiently. Frequently the sugar will return in as large amounts as before by mixing carbohydrates, but more often a slight glycosuria will be followed by a rapid decline to normal. It is then that the third starch may be supplied and finally the patient given a mixed diet.

In many instances dietetic measures alone do not suffice. Though symptomatic treatment has been abandoned and treatment from an etiological standpoint has met with little success, drugs and organotherapy have still a prominent place in the treatment of diabetes. So little is known of the action of extracts of glands and tissues, and the reports show such wide variations, that little or no reliance can be placed upon them. Pancreatin is probably most widely used for obvious reasons. At the present time, much work is being done on the effects of duodenal extract "secretin." A great field lies before us here, and the possibilities are manifold.

Of drugs that have been used in diabetes even our voluminous pharmacopoeia blushes with envy. There are a few, however, that have stood the rack of indiscriminate use; and these remain, not because of their curative action or any known explainable effect, but because experience and experimentation

have proven them of service. There are three especially that deserve consideration. They are opium, antipyrine and salicylic acid. I place them in order of importance and usefulness. Whether these increase the sugar metabolism of the body, decrease the heat requirements of the organism by lessening tissue changes, or have a specific effect, only further research will prove. Suffice it to say that diabetics take large doses of any of these drugs well. Of the opium series, codeine is the most useful. After the diet has minimized the sugar excretion, this drug will frequently reduce it still further or at times cause it to totally disappear. Some patients, however, do better on antipyrine, which may be administered in extreme doses. It should not be continued over too long a period, but give way from time to time to other drugs and to changes in the dietetic routine. Aspirin is the most useful of the salicylic group, in that it disturbs the gastro-intestinal tract less than others of the series. Forty to fifty grains daily may be given, but care should always be exercised lest it cause renal complications or aggravate an old nephritis. With any of these drugs a patient who has been on small quantities of carbohydrate may have the total amount ingested increased without augmenting the glycosuria. Time forbids a discussion of alkali treatment for acidosis, though I may add that its efficacy is in many instances extremely doubtful. Rest cures and the Spa are chiefly efficacious because of the reduction in metabolism that necessarily follows and the more careful diet and graduated exercise that is enjoined.

In giving these few observations on the treatment of diabetes mellitus. I have done so with the view of showing how diagnosis of the daily condition, treatment and intelligent study of the case can be combined with benefit to the patient and profit to the practitioner;



and it entails no more labor than the urine estimation, whose simplicity is apparent. There is no doubt that cases managed carefully will in instances completely recover. There are some cases further that a rational, intelligent, dietetic management will perfectly cure. There are many patients in whom the reduction of sugar alone will give a measure of health and freedom from symptoms far beyond their expectations. Prompt and judicious treatment of severe cases will probably diminish the liability and the severity of the more dangerous complications. With the view of keeping the glycosuria at the ebb, and at the same time of raising the patient's limit of toleration, success will oftentimes reward our efforts in the treatment of some apparently hopeless cases.

I have cited three cases illustrative of the form of diabetes mentioned above.

In the third chart we find a mild case of diabetes, the patient, aged 60, excreting 35 grams of glucose on a mixed diet. There was never any acetone. On strict carbohydrate-free diet the sugar quantity and specific gravity fell. The addition of bread on the fifth day causes a return of the sugar, but soon a tolerance to this one carbohydrate food is established. Changing the starch to potato does not alter the sugar excretion. Then adding another starch and still another till regular diet is established, has no deleterious effect. This patient remained well for

over six months. Since then I have not seen him.

The first chart, S. K., aged 37, was one of moderate severity. On a mixed diet note the enormous sugar excretion and the large quantity of urine. Two days of strict diet reduces his sugar to one-twelfth the amount. No acetone or diacetic were present, but with the larger sugar excretion far in excess of the carbohydrates ingested, acetonemia would be inevitable. Nor does the sugar disappear on strict diet. Doubtless, therefore, the sugar comes in part from the proteids. One starch in the form of oatmeal, bread and rice were tried successively with no marked increase in sugar. Meanwhile antipyrine and then salicylic acid were given also, without benefit. This is a case where drugs will avail little, but where a sufficient amount of one carbohydrate will keep the glucose at a minimum and be perfectly compatible with the patient's health.

The case M. L., is a girl of 12 years and is a severe type excreting large quantities of acetone and diacetic acid in addition to 150 grams of glucose on a mixed diet.

Strict diet immediately reduces the sugar. Antipyrine is given and soon the signs of acid intoxication disappear. Salicylic acid is substituted and suddenly, with the patient on a strict diet, all the forboding signs of coma return. On the eleventh day only oatmeal was given to supply a starch. Then codein is administered in increasing dosage and the case improves rapidly. Acidosis disappears and the glucose becomes less. From that time on the patient was put on this regime: One week of strict diet; one week of strict diet with oatmeal and with codeine; one week of strict diet with oatmeal, and one week of strict diet with bread and with codeine. The patient was instructed to repeat this dietary each month.

In the case of old persons who complain of slowness and difficulty of urination and other urinary symptoms pointing to enlargement of the prostate gland, it is necessary to bear in mind the possibility of the trouble being due to tabes. Even though examination shows the prostate to be enlarged, it does not necessarily follow that it is the cause of the urinary disorder, and it is important to determine whether tabes may not be present.—*Int. Jour. Surg.*

In persons suffering from hemorrhoids there are often conditions of irritation and congestion in the anal region which should be removed before resorting to operation. This can usually be done by thorough cleansing several times daily, especially after a stool, and by the use of some weak antiseptic wash. In fact, irritation about the anus may be responsible for more suffering than the piles themselves, and after its removal operation may subsequently prove unnecessary.—*Int. Jour. Surg.*

THE ETIOLOGY AND PROPHYLAXIS OF TUBERCULOSIS.*

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There is in some individuals a well-marked predisposition to tuberculosis, which may be hereditary or acquired. The most direct exciting cause is the inoculation with the tubercle bacillus; in this way the disease may be experimentally produced in animals, but in the human being it is an exceptional method. In the human being it is usually necessary to have, first, a predisposition. Second, one of the ordinary causes of inflammation. Third, the growth of the tubercle bacillus.

Heredity shows in physical deformity and often in a tachycardia; such conditions lower the resistance of the tissues, resulting in a disposition to successive attacks of bronchitis; there are also the strumous conditions of childhood, poor food, poor hygienic surroundings, improper beds, malnutrition of any sort which interferes with physical growth.

These factors show their effect in flat chests with insufficient expansion of the upper lobes of the lungs. It is amazing many times to find a patient with well-developed chest doing abdominal breathing, and when we reflect upon the amount of residual air left after normal expiration, is it to be wondered at that the apices, bathed in this stale and organically loaded air become a ready seat for the lodgment of the seeds of consumption?

The general public are not educated to know that the care of the upper air passages is of great importance, and

that nasal spurs, adenoids, etc., are an etiological factor of immense weight. Another influence of prime importance is the poor construction of school seats and desks; children who are subject to such adverse conditions acquire deformities of chest, shoulders and spine. We read of the baneful effects upon bookkeepers who are compelled to work at low desks, and when it is the exception to see even in banks or business houses well designed desks, is it not surely a very important subject to have our school seats and desks conformed to the physique of each and every pupil?

Constipation in the young is a factor which should not be overlooked, for while no one can definitely state what role this condition plays in etiology, still it stands to reason that a system, saturated with the toxic products of effete material, is being undermined, and the cell resistance lowered. Proper ventilation of school rooms, and instruction to the pupils upon the necessity of cleanliness must come into the consideration, for it is only necessary for one with good olfactory organs to enter a school room in winter to readily understand that the air is not of a breathable quality, is vitiated, stale, filled with multitudinous odors, and not only sends the teacher home at night with a headache, but saturates the blood of the pupils with carbonic acid and lowers the general health.

The act of promiscuous expectoration is a villainous habit, and should be prohibited. The percentage of tubercular

*Read before the Montcalm County Medical Society, July, 1907, in a symposium on "Tuberculosis."

cases among the street sweepers of New York City, who, when first employed, are examined physically and pronounced perfect, is surely the most striking example of the virulence of dust, mixed with the excreta from horses, with the addition of expectoration; this dust apparently forms a culture medium which enables the tubercle bacilli to flourish.

With the advent of motor cars and trucks, horses should be superseded in crowded city streets, thereby eradicating one of the sources of infective material. Prof. Charles Chandler, of Columbia College, had his assistants gather specimens of dust from the street, and from window ledges of a Fifth Avenue house, and his microscopical examination revealed, as he tersely put it, "that the nearer he went toward heaven the more horse manure he discovered." The idea of direct heredity is a matter of the past; but the child does, or may inherit a lack of cell resistance to disease, and from the fact of this weak cell material it breaks down when exposed to even a mild tubercular infection.

As a second factor in etiology, there is unresolved pneumonia, which in my experience is a starting point for many cases of phthisis. A pleurisy, which has left adhesions and consequent impairment of aeration, is sometimes a precursor of phthisis, as also neglected coughs and colds, la grippe, and catarrhal conditions; it must not be forgotten that the tubercle bacillus, in order to grow, must have a suitable soil and the ordinary inflammatory conditions prepare just such a soil.

PROPHYLAXIS.

It has been my idea for many years that before the white plague is eradicated, it will be necessary to modify marriage laws so that each and every applicant for the marriage state shall receive a clean bill of health from a physician, and a moral bill of health

from the pastor or priest. Syphilis plays an important part in bringing weakened constitutions into existence, weak morally and weak physically, ready to be vanquished in the first combat with the tubercular germ. Every day I see children who are mouth-breathers from adenoids, nasal spurs, etc., and these conditions are allowed to persist because of lack of education of the parents, and while we are making some progress in our public schools by introducing the subjects of physiology and hygiene, the benefits will not be derived by the present scholars, for they may already have acquired the weakened frame or tuberculosis itself, and are in danger of transmitting the predisposition to their children.

I advocate schools for the education of the parents in regard to this condition, and then these predisposing conditions, when they occur in their children, will be recognized at an early date and proper procedures instituted to remove them. I advocate the appointment of a physician to each school, whose duty it shall be to see that rooms are ventilated properly, seats and desks be in conformity with the pupils occupying them, and lectures upon hygiene given which will cover other subjects than the baneful effects of alcohol and tobacco. Let us perfect the physical conditions of our children, for it is chiefly the weakened bodies that crave artificial stimulation.

Prophylaxis would scarcely be complete if mention were not made of that sect who claim that such a thing as the tubercle bacillus does not exist; it is farcical to allow the Christian Scientists to blind its believers to the dangers which real science has demonstrated; this disease should be classed in the same category with other infectious diseases, and proper authority should have a lawful right to step in and command "hands off."

The subject of proper sleeping rooms

should be taught in a special course in every school of architecture, and country carpenters should understand the necessity of sunlight, air, and the requisite cubic feet for each individual. I will state from personal observation that it is the exception for sleeping rooms in tenement apartment houses in New York and Chicago to have outside windows; they usually open upon an air shaft and many are dark at mid-day, and no ray of sunlight ever penetrates. Is it any wonder that phthisis is rampant in such quarters? Any one who has tented among the balsams of the Upper Peninsula can testify what a tonic the bracing air is for him; after about a week one feels as if all his tissues were undergoing a metamorphosis, and the invigoration increases constantly.

Unresolved pneumonia is an important thing; it is not a successful case for you if your patient, after apparent recovery from his seven or fourteen days' sickness, continues with a little hacking cough, gradual loss of weight and evening rise of temperature; the majority of this class of patients can be cured if the condition be recognized at once. Given a patient in this condition, the unresolved spot must be found, and dry cups applied—not the drug store cups with the rubber bulb, but cups treated with alcoholic flame, which make a counter irritation that cannot be equalled in any other manner. It is advantageous to put convalescents from pneumonia upon petroleum emulsion, which is a valuable reconstructive. Pleuritic adhesions should receive proper attention, with no cessation from respiratory gymnastics until adhesions are broken up; counter-irrita-

tion with tincture of iodine is of assistance.

Education along the lines of hygiene should be rigid in regard to dairies; the majority of farmers do not understand the value of clean stables, clean udders, or clean hands, so that a large share of milk undergoes the risk of contamination; there should be an inspector in every township, whose duty is not only to inspect, but to instruct those who are ignorant of the value of cleanliness. Inspection of slaughter houses in the country is woefully neglected and in many cases they are as bad as pest houses.

Prophylaxis would surely not be complete if the care of those ill with tuberculosis was not considered. The sanatorium treatment is of great value, as the patient is under direct observation. He is educated to destroy his sputum, to live hygienically, and this applies to eating, sleeping, exercise or rest, as indicated in each individual, and, in fact, regulating the patient's whole life.

I recall a case of tuberculosis in an Indian girl affecting the elbow joint, some of the long bones, and one sinus running from the jaw bone; we resected the elbow joint, leaving a flail arm, but as the sinuses persistently refused to heal, she left the hospital. Going thence into the country, some physician regulated her general living, and in six months she returned with the sinuses all healed but one, which had some dead bone as its nidus. She had shown a general gain in weight and a wonderful improvement in general health. This case I cite simply to demonstrate what results can be obtained from placing a patient in good surroundings, with change of air and good food.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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FEBRUARY

Editorial

The telephone situation is now the most talked topic among members of the Wayne County Medical Society. A plan to avoid duplicating telephone service in physicians' offices was well worked out by a committee and seemed almost certain of being successfully adopted, when a representative of the Home Company made untruthful statements at the meeting, and worked upon the sympathies of a few until much confusion resulted and action was postponed.

The facts, as we understand them, are these: On October 16, a representative of the Home Company was present at a meeting of the society, and gave their best rates to physicians and dentists as \$60.00 per year. This is \$12.00 less than is being paid at present. A committee was appointed, consisting of Doctors A. W. Ives, A. H. Bigg, W. R. Chittick and Hal C. Wyman. The committee canvassed the situation thoroughly. It obtained a rate of \$60.00 per annum from the Home and \$50.00 from the Bell Company.

On January 6th. the committee reported this proposition. A Home representative was present and stated that his company had had no opportunity of submitting rates—a statement which the facts in the case do not bear out. Those not aware of the meeting on October

16th, and the work of the committee, immediately took the view that the Home Company was not being fairly treated, and no action was taken other than that but one phone should be used.

Not only does the Bell Company offer the better rates, but it is the system which we all have, which practically all of the patients, who have telephone connection, have and it is in working order. As Dr. Collins puts it in the January number of the *Detroit Medical Journal*:—

“Now we are confronted with these facts: We have unanimously decided to use one phone. Here we have a phone, reaching all our people in perfect physical condition to meet all our requirements, already installed in our offices. Indispensable to our needs until replaced by another, reaching all our people and installed in our offices, we get a rate that is fair as compared with cities the size of ours or with as many connections as we have. We can without jar or friction or new argument, continue with this phone. By using this phone it not only makes it possible for all of us to ignore other systems and all stand in the same relation to our patients. Just as favorable to one as to another. We are sure of as fair and just treatment by one corporation as another. We can use the phone now in and ignore the other, but can we under existing conditions ignore the one now in and use the other? We have no interest in the welfare of either company. They both are abundantly able to care for themselves. We have interest in our own welfare, and let us choose the one that is possible and practicable.

Should the new company, after knowing the old company's rates, give us a rate away below, could we maintain our determination to use but one phone, and replace the old phone with the new?

The new phone is not in physical condition to meet our needs, under the most favorable conditions conceivable it will be many months before they can do so. In the meantime, to do our business, we must retain the phone now used, and the new phone as fast as placed, till such time as the new phone reaches our people. When once installed and used by the people, will there ever come a time when we can bring about sufficient unanimity in a profession like ours to tear out the old phone and use the new? Will we not be

saddled with two phones with the annoyance and double expense, till such time which will probably surely come when there is a merger, and we will again all be using but one and the same phone? The conditions we have to meet, if thought out without prejudice or favor, should leave no doubt in the mind of any man of what is possible, what is practical, and what we must do, and do it before a second phone is largely used if we are to protect ourselves."



A reprint concerning Christian Science, from the November issue of the *Broadway Magazine*, gives case reports of cures accomplished by their methods. It is averred that over 13,000 records of cases are held by the Christian Science church authorities of New York State, and Mr. William Allen Johnston bases his article on examination of these records, which are said to be accessible for verification. The article is so insidiously convincing to an unscientific or lay mind that it has almost the effect of an advertisement. But close scrutiny reveals many statements that a physician would desire to question. For example, when it is said that over 4,000 of "these patients were either given up by physicians or had despaired of receiving relief" we should like to have some testimony from the physicians on that point and some information as to why certain patients despaired of relief. What sort of doctors did they consult and how many and how long?

A table of the diseases cured includes every ailment, including tuberculosis, rupture, broken bones, tumors, peritonitis, cancer, locomotor ataxia, etc. But whose diagnoses were these and upon what data were they founded? Not one of the cases cited includes a single objective description; every diagnosis is an unsubstantiated premise, and the symptoms as related appear to be the notes either of the patients themselves or of the healer. How great a value can be set upon the case report or diagnosis of

Christian Science attendants, who are admittedly untrained in all that pertains to study of disease? How much credence can one give to the cure of a case, whose full report is as follows:—

"Affected with Bright's disease, paralysis and locomotor ataxia during a period of about twelve years. After exhausting all medical assistance obtainable (approximate cost of medical service, \$5,000) and upon the declaration of a council of physicians that they could offer no further help and that the case was hopelessly incurable, Christian Science treatment was resorted to and instantaneous relief was obtained, with a positive and steady improvement thereafter, producing a practical cure and return to good health in something like six months."—E. D. D., New York City.

The other reports are similar, and remind one of nothing so much as newspaper testimonials to quack remedies.

The author goes on to contrast the death-rate (17.3) of cases under medical treatment in New York with the death-rate (3.82) of cases treated by "Science." This is a comparison whose absurdity is so manifest as to be disgusting. Yet to the lay mind what a powerful argument!

The evidence afforded by these reports depreciates in value still further when it is soberly stated that the average duration of Christian Science treatment was less than one month, often one day and sometimes less than an hour. Great emphasis is put upon the fact that "eminent" physicians had attended many of these cases; but we all know the reckless use of the word "eminent" among patients, and in fact it is often applied in all sincerity to absolute quacks. The more stress laid upon the "eminence" of the "council" of doctors and the "thousands of dollars" expended in medical treatment and the "hopelessness" of the case, the more we incline to suspect the complete absence of true organic disease.

The whole article is so humorous in one aspect and so tragic in another that it deserves careful reading.

The latest award of the Nobel prize for medicine is to Alphonse Laveran. This is the first award to a French physician, the previous ones being to von Behring, Ross, Finsen, Pawlow, Koch, Golgi, and Ramon y Cajal.

Laveran was born in 1845, and his career in medicine has been as a member of the medical corps of the French army. His discovery of the malarial parasite was made during a trip to Algeria, and in 1880 he reported it to the Paris Academy of Medicine. It was several years, however, before this report gained wide credence. Since then he has been a prominent worker in military hygiene, and has published many works on the subject, including a manual of diseases and epidemics in armies, which is a standard.

Medical research in America is evidently still unable to compel the attention of Europe, at least as measured by the Nobel prize. In many ways the science and art of medicine are superior in this country, but in the field of original investigative work America is inferior. It should be a goal for our profession to seek the improvement of existing facilities for research work, the creation of new laboratories, and the commoner use by the practitioners at large of exact and scientific methods.



June twenty-fourth and twenty-fifth, the Wednesday and Thursday of the last week in the month, have been fixed, by the Council, as the dates of the annual meeting. It will be held under the auspices of the Manistee County Medical Society, in the city of Manistee. The time decided upon is somewhat later than usual, in order to give an interval of three weeks between our meeting and that of the American Medical Association, which convenes in Chicago, June second to fifth. It is probable that an unusually large number of our members

will go to Chicago, and experience has shown that our attendance suffers when the meetings are close together in point of time.

It is also likely that the weather will be pleasanter in Manistee late in June than in the month of May.

The request for volunteer papers for the annual session will appear in the March Journal. Each county society should select at least one member for the program.

In Texas, the State Society has adopted the plan of putting upon the program only such papers as have been read before county societies. "Such early preparation, discussion, consequent revision and amplification will ensure a better grade of contributions," is the sentiment there expressed, and there are certainly some good arguments to support such a rule. Such a plan for Michigan is worth discussing.

Every member of the society should plan now to be present at Manistee. There are many who are seldom present, or have never attended a state meeting. It is time well spent, for nowhere can pleasure be better combined with benefit than at the annual meeting.



Lenawee County is conducting a praiseworthy campaign for new members. The officers and active members have the laudable ambition of getting into the society every eligible man in the county. Read the excellent letters sent out—under "County Societies."



The Journal of the Indiana State Medical Association is the latest addition to the list of state publications. It is a credit to the organization, and the editor, Dr. A. E. Bulson, Jr., of Fort Wayne, is to be congratulated upon the splendid appearance and table of contents of the first issue.

Book Notices

Treatment of the Diseases of Children. By Charles Gilmore Kerley, M. D., Professor of Diseases of Children, New York Polyclinic Medical School and Hospital, etc. Octavo volume of 597 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net.

This volume will be welcomed by the man doing general practice who wishes for information on the treatment of children, somewhat more in detail than is found in the usual textbook on pediatrics. The first chapter consisting of 45 pages, is devoted to general principles of hygiene, the author emphasizing especially the necessity of extreme cleanliness and of systematic routine in the care of children. Details concerning the normal infant are here included, for which one often searches in vain in the usual book. The second chapter discusses the premature infant and diseases of the newborn. The third chapter, on nutrition and growth, consists of over 100 pages and in it is to be found an excellent account of infant feeding. The section on substitute feeding is especially to be commended. The essentials for the production of and care of a fresh milk supply are dwelt upon at considerable length, emphasis being laid upon the two cardinal points of cleanliness in milking and the keeping of the milk at a uniformly low temperature. The author prefers raw cow's milk, but under certain conditions advocates pasteurization. Proprietary foods are given their proper place, the author remarking—"the exploiting of photographs of crowing, fat, red-cheeked babies which are used to illustrate the supposed virtues of this or that manufacturer's food composed principally of maltose, is not a very high minded procedure on the part of the manufacturer who thus stoops to steal the credit which belong to the cow!" Food formulae and common errors in feeding are especially important sections of this chapter.

The following chapter discusses most satisfactorily the diseases of the digestive tract. It is perhaps the strongest, as well as the most important, chapter in the book.

Then follow chapters on Diseases of the Respiratory Tract and Diseases of the Heart.

The contagious diseases are next considered. Under diphtheria the author says: "If there is one thing, in addition to its great usefulness, that we have learned as to the administration of anti-

toxin, it is the necessity of giving it in full doses." He recommends 5,000 units at the first injection.

The section on "Temperature in Children" is suggestive.

"Every infant in fair health should be vaccinated." "In well infants, vaccination should never be delayed beyond the fifth month."

Gymnastic therapeutics are set forth in detail. There is a complete list of drugs with the doses suitable for children and a good index.

This book fills an important place in medical literature and fills it well.

The Principles and Practice of Modern Surgery. By Roswell Park, M. D., Professor of Surgery in the University of Buffalo, N. Y. In one very handsome imperial octavo volume of 1072 pages, with 722 engravings and 60 full-page plates in colors and monochrome. Cloth, \$7.00, net. Lea Brothers & Co., Philadelphia, 1907.

This large volume is the immediate successor of the "Treatise on Surgery by American Authors" which went through three editions. The various contributors to that work place their material in the hands of its editor, allowing this individual work to take the place of the treatise.

While an exhaustive system of surgery can hardly be prepared by one man, there is much to be said in favor of the individual work, especially when the needs of the student are considered. There is a personal equation reflected throughout a book which is from the pen of one man, the lack of which is sometimes seriously felt in a work having many contributors.

Park has a clear, crisp style, which makes the book particularly pleasant to read. He does not hesitate to quote from the work of other authorities, yet one is never in doubt as to his own ideas or methods of procedure.

The space given to the classical chapters of fractures, dislocations, ligation of vessels, and amputations has been wisely curtailed, and abdominal surgery is particularly well elaborated. The surgery of the female pelvic organs has not been included.

The author has recognized the need of more elaborate sections on ante and post operative treatment and has contributed some excellent paragraphs on the subjects.

The illustrations are good, but not elaborate. The press work is excellent and the binding durable.

The book adds considerable to surgical litera-

ture and will not prove a disappointment to any one desiring a one-volume surgery, representing the net knowledge of today.

Diseases of the Nervous System. Edited by Archibald Church, M. D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University Medical Department, "Die Deutsche Klinik," under the general editorial supervision of Julius L. Salinger, M. D. Pp. 1200; 195 illustrations and 5 colored plates. The fourth volume of Modern Clinical Medicine. New York, D. Appleton and Co., 1908.

Since the latest volume of the Modern Clinical Medicine series is a book of over 1200 pages, an exhaustive acquaintance can hardly be expected of the reviewer. It is made up of authorized translations of monographs from "Die Deutsche Klinik" by German authors of acknowledged reputation, many of them of especial reputation in connection with the subjects of which they treat, e. g., Quincke, who writes on Lumbar Puncture, and Wernicke, whose contribution is upon the Symptom Complex of Aphasia. The monographs are all thoroughly modern, and they cover much of the field of diseases of the nervous system; but one is surprised to find nothing on chorea, and meningitis seems only to be mentioned in the article on Lumbar Puncture. A volume thus made up of unrelated monographs materially suffers this disadvantage, that it is hardly to be expected that its field will be systematically covered and it will inevitably lack the continuity of any one virile and pleasing style.

Quite exhaustive is the chapter on General Neurological Diagnosis by P. Schuster and the fact that the article upon the Normal Pathological Histology of the Central Nervous System has especial reference to the neuron theory, will give to this chapter a new value.

Quincke, Wernicke, Erb, Remak, and others, are names well known in the neurological world and they have contributed much that is of value.

The work of the publishers is well done.

A Compend of Surgery. By Orville Horwitz, B. S., M. D., Professor of Genito-Urinary Surgery in Jefferson Medical College. Pp. 334, cloth. \$1.00. Philadelphia, P. Blakiston's Sons and Co., 1907.

The sixth edition of this compend, dated 1907, has 334 pages, covering the subject of surgery that is consistent with the purpose and average scope of the series. Probably its appeal is still

chiefly to the student of medicine who is cramming for examinations. There is appended a list of formulae commonly useful in surgery. Illustrations are numerous and many of them helpful.

Progressive Medicine. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., and R. H. M. Landis, M. D. December 1, 1907. Philadelphia and New York: Lea Brothers and Company. \$6.00 per annum.

The last volume for 1907 of this excellent review contains sections on "Diseases of the Digestive Organs," by J. Dutton Steele; "Diseases of the Kidneys," by J. R. Bradford; "Surgery of the Extremities, Shock, Anesthesia and Infections," by J. C. Bloodgood; "Genito-Urinary Diseases," by W. T. Belfield; and Practical Therapeutic Referendum, by H. R. M. Landis.

Progressive Medicine is the most practical of the reviews. Were one to read the different volumes carefully, he would keep up with the progress of medicine, though he did but little other reading.

Abstract of the Minutes of the January Meeting of the Council.

The mid-winter meeting of the Council was held at the Hotel Ponchartrain, January 16th. There were present Councilors Dock, Haughey, Rockwell, Spencer, Burr, Seeley, McMullen, Baker, Dodge and Ennis, Secretary Schenck, and Treasurer Moran.

The Secretary of the Council, Dr. Haughey, reported that he had collected the constitutions and by-laws of 40 state and 30 county organizations. A large number of our county societies have no printed constitution and some are using the blanket form recommended by the A. M. A.

The Chairman of the Council, Dr. Burr, reported that the work in the state was progressing in a very encouraging manner; a large number of district meetings had been held during the year; reports from most of the county societies have been highly encouraging.

The report of the State Secretary showed a paid membership for 1907 of 1894.

The report of the State Treasurer showed a balance in the treasury of \$2,180.53.

(The details of these reports will be given to the House of Delegates at the annual meeting.)

The detailed reports from the counties were given by the Councilors and these reports indicated that the branches are in better condition than ever before. The district meetings have been a great success. Post graduate work in the counties where it has been undertaken, has proven the best work yet taken up by the county organizations. Wexford and Tuscola counties have successfully solved the county contract work. A few counties are having trouble over contract accident work. Alpena and Cheboygan societies have had no meetings during the year, and steps will be taken to revive interest in the organizations. Charlevoix county has requested to be united with Emmet. New charters have been granted to Antrim and Ontonagon.

The question of the advisability of adopting some form of medical defense for the whole state was discussed and a committee appointed to study the matter and report at the Manistee meeting. Dr. F. B. Tibbals, of Detroit, addressed the Council on the subject.

A committee was appointed to act with the State Secretary in regard to a uniform method of bookkeeping by county secretaries.

It was recommended that all county societies have their constitution and by-laws printed, and attention called to the fact that printing can be done by the press of the American Medical Association.

The following resolutions were introduced by Dr. Burr, supported by Dr. Spencer and carried.

Whereas, It is believed that to limit the publication of names in the Directory of the American Medical Association to those holding membership in County Medical Societies would greatly promote membership in these societies, and

Whereas, A directory publishing these names alone would be sufficient for the practical purposes of members of the Association, and

Whereas, Other complete directories of physicians are in existence, which directories are available for the purposes of advertisers needing the larger list,

Therefore, Be It Resolved, That in the opinion of the Council of the Michigan State Medical Society the forthcoming new edition under the auspices of the American Medical Association should be a directory of its members only, and that the Council strongly recommends the elimination of all other names therefrom;

Resolved, That the Secretary of the Council be instructed to furnish a copy of these resolutions to the publishers of the directory and to furnish therewith a transcript of the resolutions on the same subject approved by the House of Delegates of the Michigan State Medical Society in 1905.

Dr. Dodge was elected Vice-Chairman of the Council, Dr. Schenck was re-elected Secretary-Editor, and Dr. Moran was re-elected Treasurer.

The date for the annual meeting was fixed for Wednesday and Thursday, June 24th and 25th.

The Council adjourned, to meet in Manistee on the afternoon of Tuesday, June 23rd.

County Society News

Houghton.

The January meeting of the Houghton County Society was one of the best ever held. Dr. H. M. Joy read a paper on Carcinoma of the Pancreas. (To appear in the Journal.)

Dr. W. K. West, Painsdale, was elected delegate and Dr. W. T. S. Gregg, Calumet, alternate.

W. D. WHITTEN, *Sec'y*.

Huron.

The Huron County Medical Society met at Bad Axe, January 13. Dr. C. M. Morden read a paper on "Asthma;" Dr. D. Conboy read one on "What Are the Best Medical Journals?" Both papers were thoroughly discussed. The members unanimously adopted the following resolutions:

Resolved, That the members of the Huron County Medical Society hereby express their approval and admiration of the excellent and educating work done by the Council of Pharmacy and Chemistry of the American Medical Association in exposing the commercialism and criminality of some proprietary medicine makers; and, be it further

Resolved, That we express our disapproval of the publication of so-called medical journals in the interest of manufacturers of nostrums.

D. CONBOY, *Sec'y*.

Lenawee.

The following letter has been sent to all eligible physicians not members of the society:

Adrian, Mich., Janaury 14, 1908.

Dear Doctor:

This is an age of organization. Great achievements today are made only through united effort and organized push. For centuries the profession of medicine has remained passive—(while civilization and human progress were rapidly gathering momentum;) content with its scientific researches and its quiet and kindly ministering to human ills. It is only within the last few years that our profession has sought by an union of its forces to become a power that shall be felt in the betterment, the upbuilding and the breeding of the human race. Already we are being recognized as a factor in national progress and the day is not far distant when we shall see the establishment of a bureau of public health at the head of which shall be a physician who is a cabinet officer, who will sit in the counsels of our nation. This recognition will be gained through the influence of our national, state and county societies. We desire to strengthen our position all along the line. We want you to join us. We need your help and you need the good cheer and benefits that we can bring. By becoming a member of the Lenawee County Medical Society you also become a member of the state society, and will receive the Journal of that society monthly, which in itself is worth the amount of your dues. We hold our meetings monthly and we enclose a year's program which as you see embraces many good papers and discussions by Lenawee physicians. A course in post graduate work. Clinical cases and reports, and besides we have the promise of papers and talks from many very able men from outside the county. Last but not least you will become acquainted with your professional brothers. Learn to know and value the friendship of many a man loyal and true who is fighting life's battle, and enduring the hardships of the long night rides with a courage and fortitude equal to your own, who is with you shoulder to shoulder, keeping step to the music of duty's daily call. Come with us. Help us to make our organization strong and complete, and let us help you to the many good things we have in store intellectually and physically and socially.

Trusting that we may see you at our next meet-

ing prepared to join with us in the work of the coming year, we are,

Fraternally yours,

O. N. RICE, *President.*

L. G. NORTH, *Vice-President.*

J. C. JOHNSON, *Secretary.*

To the members of the society, a list of eligible physicians in their vicinity was sent with the following communication:

Adrian, Mich., January 14, 1908.

Dear Doctor:

As a member of the Lenawee County Medical Society, you are of course familiar with the many advantages and appreciate the benefit arising from an organization such as ours. While our society has enjoyed several years of prosperity, last year in particular, showing a marked increase in scientific enthusiasm, and social good fellowship, we number among our members but little over one-half of the physicians of our county. This should not be. You know what a bunch of good fellows we already have on our roster. There are still many more good men outside the fold. We must show them. Let us all make an individual and united effort for an increased membership. Owing to the exigencies of our profession, only a certain per cent of our members can be in attendance at meetings. An increased membership, however, means a larger attendance and a larger attendance coupled with the efforts of your officers, and the loyal support of the old members spells success.

Now as to the plan. We are sending personal letters to doctors who are within your personal reach, and who are not members of our society. We are asking them to become members, and endeavoring to interest them in our work. If these men are congenial, and you deem them worthy of membership, will you not have a personal interview with them, show them the advantages of a thorough and powerful organization of the medical profession, as represented by our County, State and National Associations. Let them know the good things we have in store intellectually and physically, and above all instruct them in the crowning glory of our local organization, the social good fellowship, and fraternal feeling brought to those who had hitherto endured the steady grind of a physician's life alone and in ignorance of the many worthy traits and noble qualities of his colleagues around him.

Trusting that you will give this matter your earnest attention, and that we may count on your loyal support, both by your individual efforts and your presence at our meetings, we are,

Very truly and fraternally yours,

O. N. RICE, *President*.

L. G. NORTH, *Vice-President*.

J. C. JOHNSON, *Secretary*.

As a result of this campaign, it is hoped that a substantial increase in membership may result.

A program for the remainder of the year has been prepared and published.

J. C. JOHNSON, *Sec'y*.

Marquette-Alger.

The annual meeting of the M. & A. Co. Society was held at the Negaunee Hospital on Friday night, December 20, 1907.

There were no regular papers prepared for this meeting. The staff of the hospital presented several interesting clinical case, which created considerable discussion.

The Secretary's report for the year 1907 showed a complete membership in the society from Marquette and Alger Counties—one member only was delinquent in the payment of dues.

The officers elected were as follows: President, H. S. Smith, Negaunee; vice-president, V. H. Vandeventer, Ishpeming; secretary-treasurer, H. J. Hornbogen, Marquette; delegate, N. J. Robins, Negaunee; alternate, C. J. Larson.

H. J. HORNBOKEN, *Sec'y*.

Mason.

At a recent meeting of the Mason County Society, officers were elected as follows: President, Dr. W. C. Martin, of Scottville; secretary, Dr. E. George Gray, of Ludington.

E. G. GRAY, *Sec'y*.

Montcalm.

Our April meeting was held in conjunction with the State Board of Health, represented by Sec-

retary Dr. Frank W. Shumway, on January 9, 1908, at Greenville.

The general subject for consideration was "Preventive Medicine." Pneumonia was selected as the greatest enemy to meet and prevent in Michigan.

A symposium of five parts was first given by our members, and a paper of much merit followed by Dr. Shumway.

A general discussion then followed by health officers and supervisors of townships in the county. Dr. Shumway's paper was solicited for publication in the State Journal.

H. L. BOWER, *Sec'y*.

(Dr. Shumway's paper will appear next month.)

Osceola-Lake.

The annual meeting of the Osceola-Lake Society was held at the L'Allegro Club, Reed City, December 30, 1907. Thirteen members were present.

The election of officers resulted as follows: President, Thomas F. Bray, Reed City; vice-president, E. N. Heysett, Baldwin; secretary and treasurer, D. S. Fleischhauer, Reed City; delegate, E. N. Heysett, Baldwin; alternate, H. L. Foster, Reed City.

Dr. L. S. Griswold, of Big Rapids, read a paper entitled, "Some Phases of Cranial Surgery." Dr. W. T. Dodge, of Big Rapids, reported several clinical cases. Dr. C. D. Woodruff, of Reed City, read a paper, the title of which was "Necessity of Care-taking Diagnosis."

D. S. FLEISHHAUER, *Sec'y*.

(Dr. Griswold's paper will appear in an early issue of THE JOURNAL.)

Saginaw.

At the annual meeting of the Saginaw County Medical Society the following officers were elected for the ensuing year: W. J. O'Reilly, president; F. W. Edelmann, vice-president; P. S. Windham, secretary-treasurer. Directors: E. E. Curtis, E. P. W. Richter, N. R. Bradley. Delegate, E. E. Curtis; alternate, J. W. McMeekin.

At a special meeting held to take action upon the death of Dr. S. I. Small, the following resolu-

tions in memoriam were adopted and an engrossed copy sent to the family:

IN MEMORIAM.

Dr. S. I. Small, an active practitioner of medicine in the city of Saginaw for more than a quarter of a century, and a leading member of the Saginaw County Medical Society, died at his home November 23, 1907, from cerebral apoplexy.

The passing of Dr. S. I. Small has cast a gloom of unusual degree over the medical profession of our city and state because of the universally high esteem in which he was held. His large clientele mourn his loss as that of a friend gone from among them.

His high ideal of the ethics of medical practice is an example to us all. Doctor Small was far above sordid strife. He did not enter into the commercial idea so prevalent today. He did good work and always believed that merit would be rewarded both in a financial way and in lasting respect. His noble character as exemplified in his daily life has done much, and its influence will continue to upbuild the medical profession and preserve the highest ethical ideas.

He was a student and always kept well abreast the advances in medical practice in this progressive age, and gave the best he had to each and every patient, rich or poor. Doctor Small was a modest man, temperate in all things, but always ready to do his duty without "flourish of trumpet" or undue notoriety. Doctor Small was a just man and tried to treat both patient and practitioner fairly.

He never lost sight of principle and justice, and nothing could happen to make him swerve from this rule. He was always proud of work well done, and never hesitated to assume and act on any responsibility thrown upon him. He did his best. Doctor Small was a kind man, an affable, courteous gentleman, and an ornament to the medical profession. He will be missed by his many friends within and without the profession, and the members of this society will always feel it an honor that he was their friend and associate.

This, our eulogy, shall be placed in the archives of the society and a copy sent to the bereaved family.

Signed on behalf of the physicians of Saginaw,

W. J. O'Reilly, *President*.

P. S. WINDHAM, *Secretary*.

S. C. J. OSTROM,

C. H. SAMPLE,

G. H. FUERBRINGER,

Committee.

Sanilac.

The Sanilac County Medical Society held their annual meeting at the court house Monday afternoon, December 16, 1907. On account of uncertain railroad conditions at the time the attendance was **not** large, but those who were present transacted the business brought before the meeting, after which they enjoyed a social visit until train time, when several members had to take their departure.

The officers elected for the ensuing year are as follows: President, James A. Fraser, Lexington; vice-president, C. G. Robertson, Sandusky; secretary-treasurer, J. W. Scott, Sandusky; delegate to State Medical Association meeting, G. S. Tweedie, Sandusky; alternate, A. W. Truesdell, Shabbona.

The time and place of the next meeting were left in the hands of the president and secretary for selecting, on which occasion a banquet will be held.

J. W. SCOTT, *Sec'y.*

Tri.

The members of the Tri County Medical Society are successfully collecting old accounts by publishing in the press the following notice:

PHYSICIANS AFTER DELINQUENT DEBTORS.

Physicians included in the membership of the Tri-County Medical Society, in session in this city recently, adopted the following resolution relative to delinquent debtors:

"Resolved, That it is necessary for the protection of the members of this society that a delinquent list be made. Furthermore, that each member of this society send a list of such debtors to the secretary of the society before January 1, 1908, and that the secretary be empowered to have printed pamphlets sufficient for each member, and no professional services shall be rendered to any patient unless he makes satisfactory settlement with the physicians to whom he is indebted. This shall in no way apply to the unfortunate or worthy poor. This resolution is to take immediate effect."

W. J. SMITH, *Sec'y.*

Tuscola.

The Tuscola County Medical Society has closed a contract with the County Board of Supervisors

to care for the indigent poor of the county for the coming year.

The Board of Supervisors agree to pay into the treasury of the society one-third of the whole amount paid out for the care of the county poor during the past three years. The society proposes to retain 20 per cent of this amount for running expenses, and the balance is to be divided quarterly among the members. This plan was originated and pushed through by Dr. A. L. Seeley, Mayville, and bids fair to prove much more satisfactory to all concerned than the previous plan, where a physician was hired by the year in each township by the supervisors to care for the poor in that particular township. This will also be an inducement for all physicians in the county to become members of the society in order to get a portion of the poor fund.

The officers of the society: Dr. R. M. Olin, of Caro, president; secretary, Dr. M. M. Wickware, of Cass City; treasurer, Dr. W. C. Garvin, of Millington.

The society now holds meetings every sixty instead of every ninety days. The next meeting will be held in Caro, the second Monday in February.

Some time ago a resolution was passed by the society fixing the rate for life insurance examinations at \$5.00 for "old line," and \$2.00 for "fraternal." The two dollar rate has caused no little trouble, but we expect to stick to it. The supreme medical examiner of the Lady Maccabees has announced her intention to be present at our next meeting to talk it over.

M. M. WICKWARE, Sec'y.

News

The Ottawa County Medical Society has organized an Anti-Tuberculosis Association, of which the secretary is Dr. Edward D. Kremers, Holland.

Small-pox cases are reported from Manistee, Springport, East Lake, Saginaw.

The prevalence of diphtheria in the Michigan Military Academy at Orchard Lake has necessitated the closing of the institution.

Dr. Henry C. Maynard, health officer of Hartwood, has resigned in favor of Dr. F. G. W. Fossdick.

Dr. Eugene Carbaugh, chairman of the committee on public health and medical legislation, of the Jackson County (Mo.) Medical Society, Kansas City, requests all members of the profession who are able to do so, to send him facts about patients treated by Dr. O. A. Johnson, of that city. The latter has posed as a cancer specialist, and has been brought to trial and his license revoked. The case is appealed to the circuit court.

Dr. S. K. Church, of Marshall, writes to the *Journal of the American Medical Association* concerning a swindling scheme recently practiced in that vicinity. An insurance agent, so styled, poses as representative of an accident and health insurance company, and offers to sell to physicians a policy for \$3.00, and to direct to them all policyholders in the community; the fees to be paid by the company. The agent, after receiving the money, disappears, leaving no policy and no address.

Dr. George T. Britton has resigned as senior house physician at Harper Hospital, Detroit, and will enter practice in Kalamazoo. He is succeeded by Dr. Alexander W. Blain, Jr.

Dr. A. L. Robinson has been appointed to succeed Dr. W. E. Rowe as county physician, Allegan.

Dr. Harvey L. Morris, of Vassar, has been appointed a member of the board of pension examiners, to succeed his father, recently deceased.

Dr. G. E. Henson, of St. Clair, has sold his residence property and will remove to Crescent City, Florida.

During the year ending Oct. 30, 1907, the state board of examiners in medicine granted licenses to 258 practitioners, 79 of which were through the reciprocity agreement with other states.

Dr. R. B. Armstrong, mayor of Charlevoix, was operated upon for appendicitis January 1.

Dr. J. A. Attridge, of Detroit, has recovered from the bullet wound inflicted two months ago.

Dr. G. B. Lowrie and Dr. G. B. Cooley have been appointed assistant surgeons to the Michigan Central Railroad.

The Northern Tri-State Medical Association met at Toledo, Ohio, on Tuesday, January 14, in the Y. M. C. A. building. The president, Dr. A. E. Bulson, Jr., of Fort Wayne, Ind., presided over the three sessions, morning, afternoon, and evening, and the program was as follows:

Morning Session, 10:00 a. m.—Diabetes Mellitus, J. J. Reynolds, Defiance; Some Applications

of Laboratory Diagnosis in Surgery, Carl S. Oakman, Detroit; The Management of the Third Stage of Labor, E. W. Doherty, Toledo.

Afternoon Session, 1:30 p. m.—The Indications of Caesarean Section, C. N. Smith, Toledo; The Value and Present Status of Vaginal Caesarean Section, M. Stamm, Fremont; Symptomatology and Differential Diagnosis of Articular Rheumatism, A. C. Yoder, Goshen; Rheumatism in Children, W. G. Hutchinson, Detroit; Further Experience in the Treatment of Chronic Constipation Without Cathartics, Louis J. Hirschman, Detroit; Operative Treatment Upon Enlarged Prostate, Miles F. Porter, Fort Wayne; Remarks on the Use of Plaster-Paris in Surgery, with Demonstrations, W. E. Blodgett, Detroit; Toxaemia of Pregnancy, H. F. Mitchell, South Bend; Treatment of Tuberculosis of the Larynx, Kent K. Wheelock, Fort Wayne.

Evening Session—Surgical Thyroids, Geo. W. Grile, Cleveland; Medical Education, Arthur Dean Bevan, Chicago.

President Ostrander has appointed Dr. A. S. Warthin, of Ann Arbor, on the Committee on Venereal Prophylaxis.

At a public meeting, held in Cooperville on January 28th, an Antituberculosis Society was organized with the following officers: President, Rev. S. B. Ford; vice-president, Mr. H. C. Davis; secretary-treasurer, Dr. N. H. Kassabian. The object of the society is the study and prevention of tuberculosis.

Dr. Charles Beaver, of Mancelona, returned recently from a trip through the state and Canada.

Dr. L. L. Willoughby, of Mancelona, has been appointed G. R. & I. division surgeon.

The physicians of Traverse City have revised their fee bill and increased the rate for day calls from \$1.00 to \$1.50. The minimum fee for confinements will be \$12.00 with regular charges for after calls.

A State Anti-tuberculosis Association is now being organized. A meeting for the purpose of perfecting the organization will be held in the assembly room of the Hotel Pontchartrain, Detroit, at 3 p. m., on February 21st. The State Executive Committee, of about 50 members, has been selected, and about 75 local chairmen appointed throughout the state for the formation of local sub-committees. Dr. C. G. Jennings, of

Detroit, is chairman, and Dr. A. S. Warthin, of Ann Arbor, secretary of the executive committee.

The students of the University of Pennsylvania Medical School have formed an organization the purpose of which is to acquaint the undergraduates with the workings of the American Medical Association, after which it is very closely modeled. The various student societies take the place of the State organizations and elect members to a House of Delegates, which transacts all the business of the association. An annual meeting is held at which papers are read by chosen members, thus encouraging original research and a scientific spirit. The organization is named The Undergraduate Medical Association of the University of Pennsylvania, and already has over two hundred and fifty members.

Marriages

Walter Robert Parker, M. D., of Detroit, to Miss Margaret F. Watson, of Evanston, Illinois, December 28.

Albert L. Laing, M. D., Rapid River, to Miss Mildred McLean, Rudyard, January 3.

Dr. W. D. Lyman, of Grand Rapids, to Miss Alice M. Reed, of Galesburg, Ill., January 2.

Dr. Donald McRae, of Beal City, was married January 1st to Miss Blanche E. Bentler, at the home of the bride in Weidman.

Deaths

Mr. A. W. Shaw, formerly superintendent of Harper Hospital, Detroit, died on January 31st, at his home on Calvert avenue. Mr. Shaw, who had been ill for some time, retired from his position last November. He will be missed by a large circle of friends in the profession.

Dr. A. Curtiss, a practising physician in Big Rapids for 26 years, died at his home from apoplexy, January 10, aged 64.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

The Channels of Infection in Tuberculosis, and the Outlook for Specific Therapy.—THEOBALD SMITH reviews clearly and impartially the question of alimentary and respiratory infection. He believes that alimentary infection is relatively rare at all ages, but more common in infancy and childhood than in adult life. He admits the occasional occurrence of infection with the bovine bacillus, but considers it uncommon, and dissents from the idea that the bovine type can be converted into the human type, which he says is entirely inconsistent with all analogy in our bacteriological knowledge. He thinks also that careful study might show that the two types of the bacillus produce different clinical forms of disease. In discussing the problem of milk infection he criticizes the plan of paying for animals slaughtered on account of reaction to tuberculin as being inefficient because it places no penalty on owning tuberculous cattle, and suggests that if it were arranged that such compensation should not be given after a stated time it would make the farmers more anxious to eradicate the disease. The complete elimination of bovine tuberculosis he thinks is to be hoped for only in the distant future; but its restriction below the danger limit he considers entirely feasible with the aid of segregation and tuberculin, and the removal of clinical cases and udder disease.

Concerning the outlook for specific therapy he is not at all optimistic. Antitoxic sera he thinks can never be of any real curative value in a prolonged invasive disease, though such a serum might be useful to tide over acute cases. He makes no very positive statement regarding the various bacterial products used to produce active immunity, except that they are contra-indicated in the acute, febrile stages. He is decidedly non-committal regarding the control of their administration by the opsonic index. He calls particular attention to the necessity for better training of the practising physician in the fundamental principles of immunity, which he calls the "physiology of the infectious diseases."—*Medical Communications of the Massachusetts Medical Society*, Vol. XX., No. 111.

Specific Treatment of Typhoid Fever.—MARK RICHARDSON has been studying the question of immunity in typhoid fever for eight years, with the purpose of developing, if possible, an effective, specific method of treatment. This paper embodies the results obtained from treatment of series of cases by (1) an anti-toxic serum obtained by inoculating horses with dead cultures; (2) the filtrates from a bouillon culture; (3) Vaughan's non-toxic residue. These results are compared with those in a series treated by the ordinary routine methods. The number of cases (130 in the three series) is rather small for a statistical comparison, but the author draws some interesting conclusions. The anti-toxic serum he found to be no more effective than the filtrates and residues, and much more expensive.

All the forms of specific treatment, when confined to the original disease, seemed to increase the tendency to relapse. On the other hand, small doses of the residue, continued into convalescence, seemed in a series of 28 cases, greatly to diminish the percentage of relapses. In a larger proportion of the filtrate cases, there was a striking immediate reaction, consisting of a chill and an accompanying rise in temperature and pulse, and improvement of the general condition. In one mild case the disease seemed to be distinctly aborted. In the series treated with the residue the fever seemed to run a course which was definitely milder, and at the same time longer. In none of the cases was the treatment accompanied by determinations of the opsonic index, though Richardson thinks that such determinations might have shed a good deal of light in some of the questions involved. He believes it to be certain that specific treatment has a powerful influence on the clinical course of the fever, and that by its use a certain number of mild cases can probably be aborted. He thinks, however, that it is important that any such treatment should be instituted as early as possible, and that in typhoid fever we are greatly handicapped by the impossibility of making early diagnosis by present methods.—*Med. Communications Mass. Med. Soc.*, Vol. XX., No. 111.

SURGERY

Conducted by

MAX BALLIN, M. D.

Skiagraphy in Orthopedic Surgery—FRED H. ALBEE, of New York, says that in interpreting X-ray plates it is necessary to observe the plate itself, not a print, and the plate should be held a proper distance from the light which should be diffused. It is of great diagnostic value in bone diseases when properly interpreted. In tuberculosis we see a thickened capsule with a blurring of the bony outlines; later comes erosion of the articular surfaces, and bone destruction. Bone atrophy is most important when recognized. There is a rarefaction of the bone and a lessening of the diameter of the shaft. The epiphysis becomes enlarged and squared. Later destruction is the most characteristic feature of the negative. Bone repair gives the return of the sharp outlines of the picture. Much can be discovered as to the progress of the lesion by repeated exposures and comparison of results. Tubercular dactylitis may be differentiated from the syphilitic form by the X-ray picture. In tuberculosis there is atrophy of the bones and cyst-like condition of the phalanges. In syphilis there is less atrophy and the articular surfaces are involved. Tuberculosis affects the epiphyses and articular surfaces, while osteomyelitis does not, involving the shaft instead. In osteomyelitis there is an actual thickening of the cortex and a hard ring of bone about the outside. Thickened walls are shown markedly in the skiagraph. Thickening of the cortex and deposit of bone beneath the periosteum are characteristic of syphilitic bone lesions.—*Medical Record*, December 28, 1907.

The Surgical Treatment of Exophthalmic Goitre.—Analysis of 500 cases treated operatively: Thyroid gland substance, or any of its preparations, should never be administered in the treatment of exophthalmic goitre. Their use in that disease is irrational, and it is almost invariably attended by an aggravation of symptoms. Their use invariably increases the danger in operative interference. All forms of medical treatment of this affection, be they hygienic, dietetic, medicinal, organotherapeutic, or electrical in nature, are unsatisfactory, and disappointing. Their comparative powerlessness has induced surgical endeavors to cure the disease. There is not any

form of medicinal treatment which has been successful with sufficient frequency to carry conviction of its worth. Serum therapy of exophthalmic goitre is as yet in an experimental state. The results attending the use of "throidectin" are not invariably satisfactory. It is now a demonstrated fact, that all operative measures which tend to lessen the secretory activity of the thyroid gland, or to diminish the amount of thyroid gland tissue present in the organism, are of value in the treatment of exophthalmic goitre. The ligation of the thyroid arteries is a procedure often difficult of execution, the hypertrophied gland having altered the anatomical relations of the part. It does not secure as complete nor as permanent mitigation of the symptoms as partial thyroidectomy, and it is, we believe, equally difficult to perform. Ligation of the inferior thyroids is just about as serious a matter as thyroidectomy. In all the cases treated by ligature but one, there was either marked or complete improvement. Partial thyroidectomy was performed in 152 cases of primary exophthalmic goitre. There were eleven deaths in this series. All the other cases made either moderate, marked or complete recoveries. In cases that survive the operation, it is invariably attended by marked alleviation of symptoms, in many instances by complete and permanent cure. The secondary form of exophthalmic goitre, when subjected to partial thyroidectomy, almost invariably recover from the operation and from the disease. The dangers of partial thyroidectomy in exophthalmic goitre are either avoidable, such as infection or hemorrhage, or unavoidable, such as "acute thyroidism." The latter also called "thyroid fever," is liable to occur after the observance of all precautions now known to us. We do not yet know how to prevent nor how to cure "acute thyroidism." Recovery from all the symptoms after the operation is neither immediate nor simultaneous. The first symptom to subside is tachycardia. The tremor and the nervous and psychological symptoms also disappear quickly. It takes months for the entire beneficence of the operation to become manifest.—AIME PAUL HEINECK, *Surgery, Gynecology and Obstetrics*,

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Some Points in the Treatment of Diseases of the Heart.—HAY, after reviewing some of the modern theories concerning the nature of heart beat, takes up the discussion of the action of digitalis in cardiac diseases. The accepted views of the action of this group are: First, improving the tonicity of heart muscle; second, increasing the force of systole; third, decreasing the frequency of the beat; and fourth, the effects of toxic doses. He points out the great difference that exists in the potency of the different drugs of the digitalis series, for example, strophanthus and digitalis in tinctures are of vastly different strength; on the other hand, the physiological effects of digitalis and squills are much more marked in increasing the tonus with slowing, than strophanthus. Squills has a greater action on the peripheral vessels, and on the coronaries than either digitalis or strophanthus, whereas strophanthus has only a very slight contracting action on the peripheral circulation.

HAY declares that when one finds indications of weakness of the heart muscle, such as dilatation, incompenation, haemic bruits, or pulsations in the veins of the neck, the indication for the exhibition of some drug of this group is present.

In regard to the question of the effects of digitalis in slowing the heart, HAY states that he has found its action most uncertain. Taking up the mooted question of cardiac therapy in cases of mitral stenosis, he agrees with the generally accepted first and second stages, but explains the action of the heart as well as the rate, in incompenated cases, differently than most authors. He cites numerous cases to prove that in the second stage of mitral stenosis, the frequency of the heart's action is very much more sensitive to the digitalis group than in the first stage. It is a noticeable fact that many patients suffering from mitral stenosis, in the first stage, have a frequent heart beat associated with some sign of dyspnea and distress; in these cases the digitalis group fails; but in these early conditions, where there is a sign of depression or loss of tonicity, then the series is of distinct value, irrespective of the pulse beat. In cases of high blood pressure where the heart is already struggling against the abnormal load, digitalis often increases the distress and should not be exhibited; strophanthus may sometimes be used by preference with benefit.

HAY is convinced that there is a tendency to be satisfied with the administration of too small doses of digitalis, and firmly believes that when the indications are for this drug, it should be pushed until the results aimed at are obtained.—*Practitioner*, October, 1907.

Treatment of Diabetes Mellitus.—NAUNYN, of Strassburg, considers that diabetes can be improved, and that a relative, though not an absolute, cure may be obtained. Prophylaxis must be insisted on in the case of those having any hereditary tendency, especially obese children. In order to secure a good result, an indispensable factor in treatment is to estimate the patient's tolerance for carbohydrates, in other words, to determine the degree of assimilation for sugar in his metabolism. Obviously, the estimate cannot be absolute, as no account can be taken of the sugar derived in metabolism from all albuminous bodies. The severity of the case can be gauged by an approximate estimate.

Dietetic treatment is first in importance. The food prescribed must be simple, and all artificial foods must be excluded, in order to keep up the necessarily strict supervision of all food taken. The dietary must be drawn up upon the basis of the value in calories of the separate constituents, and with due regard to the patient's caloric requirements. He must have enough, but not too much. In accordance with modern opinion, NAUNYN allows fats to take a prominent place in the diet by virtue of their high value in calories. He insists on the inclusion of fast days in the treatment. Carlsbad and Nenenahr are of advantage, because of the varied inducements for treatment, the mental repose obtained, and the forcible impression made; but he attaches very little importance to the direct action of the waters of these places upon the assimilation of sugar in metabolism. The cure of the patient is not obtained by any one form of treatment, or at one time, but is only brought about by continuous control and care on the part of the physician. Severe cases ought to be treated in hospital. NAUNYN, after mature consideration, sets his face against all peculiar methods of treatment, such as plum-cure, milk-cure, vegetarian treatment, potato-cure, or oatmeal cure.—*Deutsch. med. Wochenschr.*

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

Intracranial Abscess Due to the Typhoid Bacillus.—FRASER B. GURD and T. B. NELLES, of Montreal, call attention to the part played by trauma in determining the seat of infection. Their observations are based upon a case of typhoid, which a month previous had sustained a severe head wound resulting in a hematoma of the scalp. On the tenth day of the disease the hematoma showed signs of suppuration and was incised. A linear fracture of the right parietal and frontal bones was found, with bare, depressed bone. On trephining, an extra-dural blood clot was discovered, pressing upon the dura, and the surface of the clot was covered with pus.

Cultures from the hematoma and from the intracranial area showed pure typhoid bacillus, and therefore the case is an undoubted instance of local infection from bacteria circulating in the blood. The authors mention, in the light of this finding, the possibility that the frequent occurrence of periostitis of the ribs in typhoid is due to slight trauma sustained during manipulation incident to cold baths.—*Annals of Surgery*, January, 1908.

Cancer, Its Etiology, and Treatment by Trypsin.—JOHN ALCINDOR reports two cases of cancer in women, beyond operative help, and presenting certain features in common, viz.,—neither had family history of cancer; both gave history of long continued faulty metabolism; both were multiparae, subject to the usual irritations incidental to parturition; both had cancer of the breast. In these two cases trypsin was injected, and both died within a comparatively short time, although not before a marked decrease in the neoplasms was noted.

In connection with this subject and the theory of irritation as a cause of carcinoma, the author quotes statistics showing that the highest mortality from cancer is among the poorer classes, alcoholics, and ill-nourished people; that alcoholism lowers resistance, induces slovenly personal hab-

its and irritative factors therefore flourish unbattled; that the poor live in unhealthy surroundings, eat improper food, the women beget large families, suckle their children, their difficulties in parturition are ill cared for, and they contract genito-urinary diseases that are neglected. Uncleanliness favors irritation of all exposed surfaces, improper feeding favors gastric irritation and malnutrition, and thus a soil is prepared for the development of cancer on the skin, genitals, and gastro-intestinal tract.

Attention is called to the fact that irritation plays a part in the occurrence of sarcoma on the soles of the feet of natives of Africa, who walk bare-footed on rough ground, baked in the heat of the sun; also the natives of Gashmir who often present epithelioma of the abdominal wall, which is a portion constantly irritated by their method of carrying burdens.

The author holds, from these and other data, including quoted opinions from authorities, that lowered vitality and chronic irritation give rise to cancer; that the tissues, "deprived of their proper food supply or nerve impulses, or again, exhausted from over-stimulation, do not respond normally to stimulation; they are thus either destroyed or they assume new characteristics."

Regarding trypsin as a therapeutic agent the author says that it attacks all proteid matter and hence cannot be injected for an indefinite period without producing deleterious effects. It exercises no *selective* action on cancer cells, but will digest them when it comes in contact, and therefore should be injected at the site of the growth. Internal cancer cannot be successfully treated, but epithelioma of the skin, and cancer of the cervix, are suitable for the method. In nutritional disorders, where imperfectly metabolized substances are circulating in the blood, injections of trypsin are beneficial, as in gout, chronic rheumatism, etc. The author regards amylopsin as of no value, either alone, or as an adjuvant.—*Brit. Med. Journ.*, Jan. 11, '08.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

A Consideration of Some Ocular Faults Met With in Children.—GRAEF says the tendency of modern practice lies more and more in the direction of preventive medicine. In connection with the eye, however, there are a surprising number of conditions about which mistaken ideas are held by most people, and in which they are unfortunately often allowed to continue through lack of correction by the family physician.

The practitioner owes it to the profession, and to his patients, to aid wherever he can in spreading the knowledge that the trustworthy optician is fully occupied in skillfully filling the prescription, and makes no pretense to skill or knowledge that can be gained only by medical training.

Another matter about which there is a great deal of misunderstanding in the lay mind is the occurrence of "squint" or "crossed eyes" in children. Many people have an idea that cases of squint develop in children because of troublesome teething or an attack of measles, whooping cough, or one of the other troubles incident to childhood, and many of these make the still more serious mistakes of believing that if left alone the children are likely to "grow out" of the difficulty with the eyes.

No child ever became cross-eyed because of such troubles alone. The real cause of ordinary squint is some fault in the eyes themselves, the illness which seems to be the origin of the squint contributing to its appearance only by lessening the vitality of the child, thereby making it impossible for the eyes to conceal the existing fault as they were able to do before. Sometimes the fault in the eyes is not so marked in kind or degree, but that a squint which appears, when the child is weakened by illness or the effect of excitement, disappears when bodily health or quiet is restored, and such a case may easily serve the average man as an evidence that non-interference is all that is needed to cure cases of cross-eyes. Even in such patients, however, the ocular fault remains to be dealt with if occurrence of the squint is to be avoided.

The sooner a case of cross-eye, after the first appearance, is taken in hand by the ophthalmologist, the better his result will be. A fair percentage can be cured by glasses alone if properly attended.

A form of eye trouble in children about which the family practitioner is commonly consulted is the repeated occurrence of "styes" on the lid. Such patients are often brought under the impression that the difficulty is due to the "bad" or impure blood, and as a matter of fact, occasionally cases of this kind are due to malnutrition; pronounced examples are sometimes seen in diabetes for instance, but the vast majority owe their affliction to ocular faults alone, and can be permanently relieved by proper attention to this fact. Anyone may have a hordeolum at times; it is only an infection with pus germs of some part of the follicle of an eyelash, but the continued occurrence of such sores, especially if they come in "crops," should lead to an investigation of the eyes for such refractive or other faults. Every medical man has to deal with more or less numerous cases of phlyctenular disease of the cornea and conjunctiva in children. In the majority of these cases injudicious feeding and confinement to the house is a contributing cause, and in many of them unhealthy adenoid and tonsil growths also demand attention. The picture that such a child presents of a "bad cold" with its running nose, watery irritated eyelids, and the refusal to open the eyes except in the dark, seems to justify the parents in their determination to keep the little patient in the house until better. This is a mistaken policy, however, and only serves to prolong the disease. Fresh air daily, with sunshine if possible, but without it if it cannot be had, should be insisted upon. This measure and plain, simple diet from which all sweets, cakes, raw fruits, etc., are vigorously excluded, are the important items in successful treatment of such cases. An ointment of yellow oxide of mercury, 1% strength, may be used in the affected eye three or four times daily and will usually be sufficient as local treatment, unless there is ulceration of the cornea, when atropine sulphate in similar strength may be added with advantage. In addition there remains a certain percentage of these patients in whom a thorough examination of the eyes reveals to the ophthalmologist, and to him alone, defects which must be relieved by the use of suitable glasses. Such cases are numerous enough to make this a fact of real importance in practice.—*Pediatrics*, Jan. '08, pg. 7.

DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

Herpes Facialis in Diphtheria.—The occurrence of herpes facialis in diphtheria was noted long ago, but until the recent paper by Orsi, who, in an analysis of 2,400 cases of diphtheria in Mya's clinic, found herpes facialis present in 2.45 per cent, no monograph had appeared upon the subject. The present article is based on 1,370 cases of diphtheria that have been under the author's care during the last five years. In each case the clinical diagnosis received bacteriological confirmation. Herpes labialis was present in fifty-five cases, or 4.01 per cent. If three cases be added in which herpes labialis developed in lobar pneumonia complicating diphtheria, the percentage is raised to 4.2. The seasonal prevalence shows that herpes was commonest in the coldest months of the year.

The occurrence of herpes labialis in over 4 per cent, shows that the phenomenon is by no means rare in diphtheria, and well confirms the statements of Dieulafoy and Cadet de Gassicourt, who strongly urged that the presence of herpes on the lips was no proof that the concomitant angina was not diphtheritic. It is true, however, that the eruption is commoner in non-diphtheritic angina.

Has herpes facialis any prognostic value in diphtheria? Sanné and Baginsky think not, both having seen it in severe as well as in mild cases. Orsi, on the other hand, regards it as a favorable sign. All but two of his fifty-nine cases recovered. Orsi regards herpes labialis in diphtheria as a cutaneous manifestation of a reflex, which has its origin in the pharyngeal, nasal, or laryngeal mucosa, the nerve terminals of which on receiving an abnormal stimulus probably of toxic nature generate in the skin vaso-motor disturbance, resulting in the appearance of herpes. In support of this view may be urged the greater frequency of herpes in the severe forms of diphtheria, as is shown in the author's own cases, in

which, presumably, the abnormal stimulus is more powerful than in the other forms. On the other hand, it is difficult to understand why in non-specific angina, in which the degree of toxemia is less, herpes should be more frequent.—J. D. ROLLESTON, M. A., M. D., Oxon., *The British Journal of Dermatology*.

The Opsonic Method in Skin Diseases.—Whitfield states that he believes that the opsonic method foreshadows an enormous advance in our control over infective disorders, but that at present there exists a great hiatus in our knowledge, which renders the results uncertain in some cases. The following are his conclusions and are based on long and steady work at the method and are stated with reasonable impartiality:

1. The opsonic treatment of boils is uniformly successful and is the only form of treatment for general furunculosis which is in the slightest degree reliable.
2. In syncosis the treatment is a valuable aid, but must be continued for long periods in proportion to the duration of the disease and it is best combined with X-ray depilation.
3. In acne the treatment is uncertain, in some cases being most brilliant, in others without the slightest avail.
4. In septic dermatitis and ulcers the treatment is of very distinct value as an auxiliary.
5. In Bazin's disease the treatment is somewhat uncertain, but it is sometimes of assistance. In tubercular ulceration it is of great value.
6. In lupus the treatment alone is too slow and uncertain to be recommended. It is, according to Bulloch, a valuable auxiliary in preventing relapse after Finsen's treatment, and he has found it of value combined with the X-rays.—ARTHUR WHITFIELD, M. D., F. R. C. P., Sixth International Dermatological Congress, New York, 1907.

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Original Articles

GASTRIC DISTURBANCES CAUSED BY HERNIA.*

MAX BALLIN, M. D.,
Detroit.

Any and every kind of hernia causes more or less gastric or intestinal trouble. The common large inguinal herniae, if reducible, are responsible for flatulence, constipation, pain in back and groins; if adherent, all these symptoms become more pronounced. Omental adhesions in a hernia can make a patient so miserable by loss of appetite and indigestion, that serious loss of weight results, and often malign disease has been diagnosed where afterwards radical operation of the hernia removed all the intestinal disorders. It has to be born in mind that if any adhesions exist between hernia-sac and contents, a truss will usually aggravate all symptoms by pressure on the unreduced parts. Generally speaking, therefore, in adherent hernia a truss is contraindicated. Of late years, since the radical operations for hernia are done so frequently, it is an experience with every surgeon that a patient returns a few months after the operation with the happy statement, "Doctor, since my operation I do not need any more physics. I have no gas on my stomach and my rheumatic pains are gone."

I will not speak about the serious intestinal symptoms caused by acute strangulation of ruptures since the violent symptoms of intestinal obstruction and gangrene are well known to every medical man.

Post-operative hernia produces very severe intestinal disturbances; wherever located, post-operative ruptures are most troublesome to the patient. As they usually occur in badly healed wounds after drainage or suppuration, adhesions are always present with their sequelae: constipation, feeling of fullness, gas, symptoms of partial obstruction increasing to spells of vomiting and total obstruction. Patients with large surgical herniae are often total invalids. The lesson of this is obvious: first, in a prophylactic way, avoid drainage as much as possible, if drainage is necessary, drain if possible through a special stab-wound, while the original incision is sewed up tightly. Appendicitis, cholecystitis, etc., should be operated upon early to avoid the necessity of drainage with all the dangers of post-operative hernia. If a post-operative hernia has developed, exact suture of all the parts involved is indicated. Unfortunately, post-operative

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hernia occurs more frequently in patients with plenty of adipose tissue. The reason for this is clear: fat, with its poor circulation, is an ideal breeding place for infectious germs, and allows more sloughing than the well-nourished tissues of lean and muscular individuals. This point renders the prognosis of secondary operations for surgical herniae more doubtful. Usually after the strong fasciae and muscles have sloughed for a great distance, it is hard and dangerous to make such large incisions as necessary to expose the edges of the muscles surrounding the hernia-ring, and if exposed, it is quite difficult on account of tension to bring the exposed muscles together. In the past few years I have had very good results in several cases, operated upon several times previously without success, by applying the principles of the Mayo method of operating for umbilical hernia, to post-operative hernia, namely, transverse, not longitudinal incision; second, removal of all adipose tissue around the hernia-ring; third, uniting the tough and resisting abdominal fascia by overlapping the lower part of the fascia under or over the upper part.

Pardon my talking so much surgery before you, but I believe this to be a very important subject for many sufferers from post-operative hernia; and furthermore, the symptoms of most of these patients are such that they will call on our stomach specialists for relief. Therefore, I thought it wise to mention the prophylactic and final treatment of this kind of hernia. A few cases of post-operative hernia follow for illustration:

(1.) Mr. R. A short and very fleshy wholesale whiskey dealer, 32 years old, who was operated upon for an acute attack of appendicitis in 1900. The wound did not heal by first intention. Extensive sloughing of muscles and fascia took place. Ever since, he complained of attacks of abdominal pain, vomiting, feeling of fullness and constipation. All the physicians,

among them some gastro-enterologists, advised him to stop drinking and to take cigars instead of drinks, if visiting customers. Still in spite of obeying orders, the attacks of vomiting continued. Abdominal supports were applied to keep the abdominal organs from protruding through the abdominal incision. Finally Mr. R. came to me ready to follow my advice, given long before, to have his surgical hernia sutured. The operation was done on April 5, 1903. Very dense adhesions were found, causing a real kink in the neighborhood of the ileo-colic juncture. The wound healed by first intention. The intestinal disorders have not reappeared, that is for three years.

(2.) Mrs. S. Wife of a grocer. 40 years old, short and fleshy. Has a very large post-operative hernia after a radical operation for umbilical hernia. The old style longitudinal incision was applied and carried far down in order to resect some cystic ovaries also. This operation was most disastrous, as suppuration, sloughing of muscles and fascia, and a large abdominal hernia, as large as a man's head, followed. The intestinal disorders caused by the hernia, pain, vomiting, dragging sensation, disabled the woman, who is the mother of a large family. She was bedridden most of the time; the most expensive abdominal supports did not relieve her sufferings. Two surgeons made attempts to suture the hernia by exposing the muscles by a longitudinal incision, and uniting them by suture. Both attempts failed. I first saw this lady on Sept. 6, 1906. She was rather disinclined to have any more cutting done. Still she submitted once more on Oct. 11, 1906. I operated her using the method outlined before; transverse incision, removal of all fat around hernia and overlapping suture of fascia. The result is no hernia: no need of abdominal support, no intestinal disorders and re-established ability to tend to her family duties, and besides to help her husband in selling groceries.

(3.) The third case I mention because I am able to illustrate the same by photographs. This woman, 30 years old, went through an unnecessary ovariectomy in 1899. She lost her ovaries, and acquired, thanks to the asepsis of the ovariectomist, a large abdominal hernia, as picture No. 1 shows. She had most distressing abdominal symptoms, nausea, fainting spells, etc. As she was obliged to earn her own living as a dry-goods clerk, she was practically dependent upon

charity; the hernia disabled her from working. I operated this lady on March 16, 1907, by the same method. The second picture shows the result. She is working again as dry-goods clerk and has no more stomach trouble.

I will mention only by name the intestinal obstructions caused by the rarer

four kinds: (1) The so-called incomplete inguinal hernia. (2) The small femoral hernia. (3) Umbilical hernia. (4) Epigastric hernia, in or lateral to the linea alba, and under this chapter also the "pre-peritoneal lipoma."

(1) The incomplete inguinal hernia is characterized by the following findings:



Mrs. L., Post-operative Hernia. Side view before operation.

forms of hernia, the hernia in the duodenojejunal fossa, (Drietz) the hernia ileo-cecalis, and the hernia obturatoria, and lumbalis (Trigonum Petiti.)

The main attention of my paper will be given to intestinal disorders caused by small herniæ that are not easily discovered. Of these we have to consider

the finger can be introduced through the inguinal canal, into the internal ring, that is usually very patent. No hernia-sac can be felt in the inguinal canal, but in coughing and straining the finger feels a pronounced propulsion of peritoneum and abdominal contents into the canal, to feel them return into the abdo-

men immediately if the intra-abdominal pressure returns to the normal. Not enough attention has been paid to this hernia in this country. In Germany, owing to the fact that the inguinal canal is always thoroughly investigated in the examination of recruits for the army, and because nearly every physician, on account of general military duty, is familiar with the rules of military examination, on account of these facts, I must say, incomplete hernia ("Bruchanlage") is not so frequently overlooked by physicians over there as here. Now these small herniæ, at the start, are often the cause of most troublesome symptoms, the most pronounced of which is pain. The pain is different in character; some complain of dull continuous pain, radiating from the inguinal region to the back, others have more sharp colicky pains. The pain, no doubt, is due to strangulation and caused by slight injuries to the omentum entering the inguinal canal by the sharp fascia forming the internal ring. Besides the pain, gas, constipation, feeling of fullness is sometimes complained of. If the incomplete hernia is in the right inguinal canal, it has been mistaken for returning attacks of appendicitis. In other cases "Neuralgia of ilio-inguinal or femoral nerve," or neuritis has been diagnosed where a small inguinal hernia was the only cause for complaint. The following two instances are only mentioned for the sake of example; cases of this kind could be narrated by the dozens.

Mr. R., a merchant, 35 years old, came to me complaining of frequent colicky pains in the right inguinal and lower abdominal regions. A prominent surgeon had diagnosed "Chronic Appendicitis" and removal of appendix was recommended. On examination, I found the appendiceal region not painful on pressure, but the finger in the inguinal canal detected an incomplete inguinal hernia. On every cough the small hernia sac was propelled against the finger, and these maneuvers were quite disagreeable to the

patient. "That is my old pain, doctor," he exclaimed. A small soft padded truss was fitted with the result that this patient has had no more appendicitis in the last ten months.

Mr. S., a rich manufacturer, 42 years old, quite fleshy, complained for years of dull pains in the lower abdomen, radiating to the back. He had worn a truss when a child, but was considered cured from rupture. Was treated for his pain with hot and cold bath, manual and vibratory massage, X-, violet and Finsen rays, homeopathic and allopathic medicines. On examination I found a double incomplete inguinal hernia. A double truss gave him immediate relief from his neuralgia, and I am sorry incidentally, took away a source of income from several osteopaths and light specialists.

(2) The small femoral hernia causes sometimes similar symptoms to those just named, but should be mentioned especially for two reasons: First, because the symptoms may become most alarming, and second, since a small femoral hernia is not so readily detected as its inguinal neighbor. Lindner,¹ in his splendid work on hernia, pays special attention to the small femoral hernia. The same occurs usually in the female. The findings are either a large open femoral ring, without hernia protrusion, or a small femoral hernia. In this place we also sometimes find a fatty tumor, a so-called sub-serous lipoma, filling the femoral ring. This lipoma will interest us more in the epigastric variety of hernia and will be considered more fully there. The symptoms caused by femoral hernia are, after Lindner, indigestion, loss of appetite, flatulence, colicky pains, nausea and feeling of fullness. If the trouble is allowed to continue for some time, nervous symptoms, headache, fainting, and emaciations may occur. The symptoms are again due to pinching of abdominal contents on the tough femoral ring, slight strangulations, etc., and are curable only by trusses or radical operations.

(3) Umbilical Hernia. The hernia in the upper part of the abdomen, though

much less frequent than the inguinal or femoral herniæ, play a much more important role in producing gastric trouble than the latter. Umbilical hernia in small children produces, to my knowledge, hardly any symptoms from side of the stomach or intestines, unless it is

tween omentum and hernia-sac are nearly always present. Hence, no wonder that all these patients complain of gastric pain, fullness and constipation. On account of the adhesions mentioned, a truss usually aggravates symptoms. Fortunately in late years radical opera-



Mrs. L., Post-operative Hernia. Front view before operation

the rare and quite dangerous kind of large hernia into the umbilical cord. In adults, umbilical hernia always produces gastric disturbances, some of them of quite serious nature. Large umbilical hernia is usually met with in fleshy people; adhesions in umbilical hernia be-

tions of umbilical hernia, after Mayo's method, have been quite successful, even in very fleshy patients. The older ways of operation were mostly followed by return of hernia, stronger adhesions and more aggravated gastric disturbances. I had the pleasure, only two weeks ago, to

see with your secretary such a sufferer from an old umbilical hernia.

Mrs. S., a very fleshy lady, 45 years old, had spent nearly half of the last 14 years, since her first and only confinement, in bed. During her pregnancy she acquired an umbilical hernia. Later a laparotomy performed for ovarian trouble added a second post-operative hernia in the middle line over the symphysis. Two different attempts to suture these herniæ were not successful. The umbilical hernia contains, no doubt, a big piece of adherent omentum. Touching either the navel or the post-operative hernia causes immediate eructation of gas. The patient suffers from abdominal pain, feeling of fulness and flatulence, and all dieting has helped but little. She is practically an invalid on account of the abdominal disturbances caused by her two herniæ.

Besides these large navel ruptures, which are usually acquired in later life, we have another variety: a small hernia, often not larger than a pea, protrudes through a small hernia ring in the middle of the tough fibrous tissues that form the physiological scar of the umbilicus. On account of the natural umbilicus resembling a hernia, this variety is easily overlooked, and still it is important. The very sharp and hard umbilical tissue pinches protruding abdominal contents in such a way that in several cases I have seen attacks of vomiting, with perspiration and quick pulse, caused simply by a short pinching of omentum in such a tough umbilical hernia ring; for instance:

Dr. C. V., physician, 27 years old. When a baby, often had attacks of pain in region of umbilicus, that were sometimes accompanied by nausea and vomiting. His father, a physician of prominence, then consulted an eminent surgeon, thinking a slight umbilical protrusion might be responsible for these attacks, but the surgeon did not think so. During youth the attacks of pain occurred only at rare intervals, but the patient had no more vomiting or nausea. After October, 1906, the attacks became very frequent and violent. He had suffered from a severe bronchitis previous to this time and attributed the severe

spells of abdominal pain to the strain of coughing. I saw this young physician in two or three of these spells. He was suddenly taken with severe abdominal pain around the navel, perspiration covered his face, vomiting occurred. Several times during the next few hours there was pronounced tenderness around the umbilicus. The temperature rose to above 100, the pulse to 100. All symptoms subsided usually inside of ten hours. Sometimes vomiting alone without pain would occur, and was so imperative that patient had to vomit wherever he happened to be. We were doubtful for a little time if a smallest umbilical hernia we detected on the patient was responsible for his violent attacks. Appendicitis was suspected on account of the slight rise in temperature, but the attacks passed away too quickly. The stomach examination gave practically normal findings. So finally after these spells had occurred at intervals for 1, 2 or 3 days for three months, the patient was operated upon December 24, 1906. The umbilical hernia was closed up. Patient has had since then, no other attack like the ones described before the operation.

Cases of milder gastric disturbances than the case just mentioned, caused by a small umbilical hernia, I have seen frequently. One more may serve for illustration:

Mr. A. S. A well-to-do club-man, about 34 years old, complained that the rich meals and high balls in his club did not agree with him but caused "gas on his stomach," feelings of fullness, and slight pain in region of stomach. Our best men in Detroit examined his stomach, put him on diet and gave him all kinds of treatment. Dr. Chas. Anderson discovered that the rather fleshy young man had a small umbilical hernia and referred the patient to me. I operated him on May 15, 1906. Since his recovery, he again enjoys the fame of being one of the best eaters and drinkers in his club.

Epigastric Hernia and Peritoneal Lipoma.

Under epigastric hernia we understand hernia protruding in or close to the linea alba between Xiphoid process and umbilicus. Weber, an old German professor in Halle, said more than one hundred years ago that many an obscure

stomach trouble may be caused by a small epigastric hernia. Since then, in recent years, Lindner¹, Cuttner², the late D. D. Stewart,³ of Philadelphia; Cumston⁴ of Boston, Witzel⁵, Aaron⁶ and others, have contributed articles on this subject. The hernia occurs very rarely below the umbilicus, mostly above

in the middle between Xiphoid process and the navel, seven above the umbilicus, one below the umbilicus and one lateral below the right costal arch (intramuscular.) It seems therefore, that the place right above the umbilicus is the favorite seat of these herniae.

Congenital and acquired defects in the



Mrs. L., Post-operative Hernia. Result after operation.

and three places seem to be the favorite ones; one is right above the umbilicus, one-half to one and one-half inches distant from the same. Second, midway between the Xiphoid process and navel; third, close to the Xiphoid process. As to frequency in these different places, I have data of sixteen cases. Of these, three occurred close to Xiphoid process, four

linea alba seem to be responsible for these hernia. The places where tendinous insertions cross the upper portion of the recti muscles seem, according to some authors, to dispose to epigastric hernia. Congenital weakness of the white line seems to be a rare causative factor, as most of these herniae occur between the ages of 20-50 years. An

acquired weakness of the white line is mostly to be held responsible, though it does not seem that a single trauma ever brought suddenly such a rupture, but it seems to require a frequent strain on this strong aponeurosis to produce weak spots, for these herniae are mostly found in hard working people. Ewald saw only one case in his private consultation practice, while Kuttner in Ewald's dispensary among hard working people, saw twelve cases among five thousand three hundred patients. Hard work is also the reason that epigastric hernia occurs more in the male than in the female. After Roth, 66% occur in the male. I never have seen a typical epigastric hernia in a woman, although I have notes on sixteen cases.

Some claimed that loss of fat was an important factor in the etiology of epigastric hernia, (Witzel) by producing weak spots in the white line; others claim just the opposite, that adiposity predisposes to such weakness, the fat replacing in some places the resistant fibrous tissue. (Lucas Champonniere, Kuttner). An important etiological factor is certainly the so-called preperitoneal lipoma. (Others call it subserous, which is wrong, as it is in front, not under or back of the peritoneum.) This lipoma is usually a small fatty tumor found right in front of the peritoneum, from pea to walnut size. It usually penetrates through a hole in the fascia and is adherent to the peritoneum. In breaking up this peritoneal adhesion the peritoneum is always opened and not infrequently we see the omentum adherent at the same place. Therefore, many believe that this peritoneal lipoma is of intraperitoneal origin, a fat piece that slipped through a small defect and became more or less detached. The lipoma predisposes for epigastric hernia, as Kuttner says, "Epigastric hernia follows the route of the lipoma." The lipoma often connects by a band with the omentum.

It is hard to say in a given case if only lipoma, or lipoma plus hernia are present. Niehus⁷ found in thirty-eight cases, six times no hernia protrusion, that is no hernia-sac; only a piece of fat was formed in a split of the peritoneum; thirty-two times a more or less pronounced hernia-sac was present. Practically it matters little if there is only lipoma or hernia. It is important to know that if preperitoneal lipoma produces symptoms, these symptoms are identical with those produced by fully developed hernia. Hence the treatment of both conditions is the same. This no doubt, is due to the fact just mentioned, that the lipoma often connects with the omentum by adhesions; bands have been observed going from the lipoma along the round hepatic ligament to the liver, to the gastro-colic ligament and stomach wall. The contents of the epigastric hernia is mostly omentum; the old expression stomachocele ("Magenbruch") is wrong; stomach is only found exceptionally in these hernia, and small intestines were only found four times in thirty cases. In the other twenty-six cases, omentum was the contents of the hernia. (Niehus.) These herniae and lipomas are usually small. An exception is a case of Gascoyen⁸, who removed a lipomatous hernia weighing twenty-five pounds from this neighborhood. In opposition, the lateral epigastric herniae are usually of larger size. Real strangulation of intestines of these herniae is exceptional; only Gussenbauer⁹, reports a case where he found under a lipoma in an epigastric hernia a strangulated necrotic piece of intestine. Gentlemen, the reason I went so fully into the pathology of these herniae is that these small lipomatous herniae are producing very frequently symptoms that are mistaken for symptoms of gastric ulcer, gall stones, etc., symptoms I thought we would understand better by going somewhat thoroughly into the anatomy of the her-

nia. Since we watch for these hernia, we find them frequently causing abdominal disorders. Six or eight years ago, authors thought it worth while reporting one such case. Now in the last two or three years I have seen in my own small private practice, three to six such cases every year.

Let us consider the most important question; what gastric symptoms do epigastric herniae and lipomas produce? Epigastric hernia and lipoma may exist for a good many years without causing any symptoms. Then suddenly, symptoms may arise, the principal of which is pain. The pain may be right in the hernia, or radiate toward liver and stomach and into the back. The pain is sometimes dull and more or less permanent in character, other times it comes in spells resembling colics. Indeed, this pain has been often mistaken for gall-stone colics. The attacks of pain may come daily or in shorter or longer intervals. Vomiting is not always present, but in many cases quite prevalent. The pain may be aggravated after eating. Appetite is usually good, but the feeling of fullness and pain after eating makes the patients careful in their meals. Many of these sufferers become neurasthenics and hypochondriacs. The gastric secretion should not be much altered by the presence of epigastric hernia. Kuttner does not believe that epigastric hernia alone should cause abnormal secretion. Among twelve cases, he mentions once dilation of stomach, three times gastritis chronica mucosa. Botland found in 22% of his cases hyperacidity; Aaron in one case anorexia with loss of weight of twenty-five pounds. Kuttner never found any of the organic acids, lactic, butyric acid, etc., present. Patients with epigastric hernia are usually constipated. This with pain, nausea, and feeling of fullness, are the main symptoms. In one case, of Lathrop⁹ the spells of colic were accompanied with jaundice. The pa-

tient was operated upon, the gall bladder was found healthy, and complete recovery followed the operation for the epigastric hernia.

The diagnosis of epigastric hernia is easy; the hernia can be palpated readily, and except in very fleshy patients even smallest hernia can be felt if the patient in standing position bends forward to relax the recti muscles. I make it a rule with all patients complaining of stomach trouble, to pass my finger-tips from the Xiphoid process down the linea alba, in order not to overlook such small hernia and lipomas. Percussion of the hernia is usually of little value on account of size and contents. Little's so-called "Spritz phenomenon," that is a thrill felt over the hernia if the patient coughs, I could never detect.

As to the treatment, if the hernia can be reduced, a bandage or adhesive plaster strapping may be tried. I have seen that a well applied adhesive plaster removed all troublesome symptoms immediately. But usually these epigastric herniae, on account of their size and the peculiar lipoma formation and adhesions, are not benefited by trusses and bandages. Surgical removal, ligating of all adhesions, and good suture, has had in epigastric hernia most splendid results; and that in patients who were often treated for years for gastritis, gastric ulcer, gall stone colic, intercostal neuralgia, etc., the small epigastric hernia being overlooked. Operation for the epigastric hernia nearly always removes all the gastric and intestinal symptoms present; only a small minority of patients operated continued to complain after the operation, but we must not forget that many of them were neurasthenic and hypochondriacs before being operated, and that many of them, as Stewart said, have acquired the pain habit. Of Kuttner's five cases operated by Lindner, four were cured of all symptoms. Of six of my own cases, only one continued

to complain about some of his gastric symptoms. Of Lepage's seventeen operations, one had a relapse of the hernia. Whether the formation of new adhesions is responsible for such rare relapses is hard to say. I will illustrate the importance of looking in obscure gastric complaints for epigastric hernia by only one of my cases.

Mr. S., 48 years old, sexton. Since two years he complained of colicky pains in the epigastrium, returning in intervals of from two to three days but becoming very frequent in the last three months. The pains are very sharp, lasting a few hours, to become duller and disappear in one or two hours. In the last few months, the pain is more severe after eating, and vomiting occurs with them, so that patient was afraid to eat and lost considerable in weight. He was treated for gastric ulcer, and a prominent practitioner had expressed the opinion that a malignant trouble might be present.

I first saw the patient on April 20, 1906, and discovered a small epigastric hernia one inch above the umbilicus. The hernia was about one inch in diameter and could be easily reduced. An adhesive plaster strap was applied and gave immediate relief. An abdominal bandage was tried but could not keep the hernia in place; therefore I operated this patient on May 8, 1906. I found a small hernia-sac containing a small piece of omentum. Adhesive bands went up toward the stomach along the omentum and no doubt their drag-

ging on the stomach when the latter changed in position and size, caused the symptoms. No ulcer, cancer, or gallbladder trouble could be detected. The hernia was closed as usual. Since this operation, patient has had no more pains, no more vomiting, and has gained about twenty-five pounds, that is, regained his usual weight.

In conclusion let me recall: Many cases of obscure abdominal trouble, colics and vomiting can be caused by hernia and it is very important to look in all such cases for small ruptures that are often overlooked. The ruptures can be of any of the known varieties, but of special importance in producing gastric symptoms are the small epigastric herniae and the peritoneal lipomas.

Complete literature of the subject is given mainly by Kuttner.

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To examine for the presence of tenderness over the mastoid bone the unaffected side will furnish a basis of comparison, pressure being made alternately over both mastoid processes with both hands.

The presence of hard fecal matter in the rectum in patients suffering with gonorrhea may sometimes give rise to urinary retention owing to the resulting irritation. It is therefore well to bear in mind this fact, since under these circumstances an enema emptying the lower bowel will often be sufficient to relieve the retention.—*Int. Jour. Surg.*

Though a glass catheter has the advantage of being easily sterilized, it readily chips or becomes cracked during sterilization, and then may break during its introduction. Hence it is better not used at all and replaced with a soft rubber instrument.

Urethral strictures situated beyond five inches from the meatus are not suitable for internal urethrotomy, which should generally be replaced by gradual dilatation with sounds. If this is not feasible, perineal section, in connection with internal urethrotomy, is generally the best procedure.—*Int. Jour. Surg.*

PREVENTIVE MEDICINE IN ITS RELATION TO PNEUMONIA.*

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In casting about for definite and interesting data to present to you on this subject, and in reviewing it, in my mind, from the standpoint of preventive medicine, two observations have been forced home to me: (1) how little we actually know about the manner in which pneumonia is contracted or conveyed; and (2) how urgent is a systematic, widespread and persistent effort to learn more concerning the nature of pneumonia, the conditions favorable to its contraction, its mode of spread, and its prevention. I believe that however we may differ with one another in our experience and conclusions regarding this disease, we all agree that *we do not know enough about it to cope successfully with it, as a menace to the health and lives of our citizens.* I might almost say there are more specific data and convincing proof of this than of any other statement I can make about this disease.

In reviewing this subject there are three aspects of pneumonia as a preventable disease which we shall consider, namely: (1) What facts are actually known and established; (2) the attitude of the State Board of Health; and (3) the relation of the medical profession to its prevention.

The early experiments of Koch, Friedlander, Sternberg, Frankel, Weichselbaum, and others, which in the early 80's showed the invariable presence of the micrococcus pneumoniae to an abnormal degree in the sputum coughed

up by a pneumonia patient, have ever since that time been substantiated by further study of the bacteriology of pneumonia; and the abnormal presence of these bacteria, wherever pneumonia occurs, is the foundation among the medical profession for its belief that pneumonia is a germ disease. This is established beyond cavil.

The second universally recognized fact is the great mortality from pneumonia. Among communicable diseases, pneumonia is among the leading causes of deaths in the United States, today, being second only to tuberculosis; and in Michigan being second to none. Whatever allowance we may make for inaccurate returns on death certificates, the high mortality rate of pneumonia is an impressive story whose significance we cannot deny.

The third well-attested fact which falls within the practical observation of every medical practitioner is that the highest mortality from pneumonia attends severe weather, the maximum mortality from the disease in Michigan being reached in February.

When we have said, therefore, that pneumonia is a germ disease with a conspicuously high death rate prevailing especially in cold climates, not necessarily extreme cold, but variable, we have named the three facts to which we can with one accord subscribe as established beyond question or doubt.

Although you may infer that anything else which may now be claimed about the communicability or preventability of

*Delivered before the Montcalm County Medical Society at Greenville, Mich., January 9th, 1908.

pneumonia is still in an experimental stage, yet there are observations and study which the Department of Health at Lansing is able to carry on, which I believe you will find interesting as bearing directly and usefully upon the practical control of this disease. I should like to consider them with you, endeavoring later to determine their true value and importance.

The Department of Health appreciates why there is such slow recognition of beneficial results from restrictive measures such as are cordially practiced for other contagious diseases, as diphtheria, scarlet fever, smallpox, etc. The germs of pneumonia are not sparks that you can see leap from their source and light upon new soil. You cannot follow their flight and prevent disaster. The majority of you, perhaps, will say to me: "I have never been able to trace one case of pneumonia to another; and I do not believe it to be conveyed from one person to another." Personally, I am free to say, that in my twenty-seven years' medical practice, I have not to my recollection been able to trace one case of pneumonia to another. But, notwithstanding this fact, here is my argument: This disease is caused by a germ found in the lungs. From the lower air passages a discharge laden with these germs is worked up by the motion of the cilia into the larynx and pharynx; and by coughing, nasal discharge, labored breathing, by speaking if you please, this discharge is eventually thrown off into the air. Is it not only reasonable but probable that the germs causing pneumonia in the lung of one person can in this manner be conveyed to the air and finally breathed into the lung of another person? Whether the second person contracts the disease or not depends entirely upon his or her physical condition. The contraction of pneumonia, unlike diphtheria, smallpox, typhoid fever, depends undoubtedly quite as much upon the physical condition of

the person as upon the presence of the virulent germ. This would explain to a large extent our common experience in seeing persons exposed to the disease (in the ordinary conception of the term) and remaining perfectly immune. Likewise, the susceptibility of a person to pneumonia being so governed by his physical condition or resisting power at the moment when the virulent germ finds lodgment in the lung, might explain how in a crowded theater, where vitiated air lowers one's vitality and resisting power, one might contract the disease, and be unable to trace its origin. These two facts you have undoubtedly observed in the majority of your cases of pneumonia: (1) you do not find persons known to be exposed to the disease through nursing or otherwise to contract it; and (2) you cannot trace a case of pneumonia to a known case. But it appeals to me that the fact that we cannot so trace a case of pneumonia, should not blind us to the possibility. The germ is in the lung. It came from somewhere. It is no more absurd to conceive that it came from the lung of another human being than it is to conceive that it simply sprang into existence. Guinea pigs have been inoculated with the pneumococcus, one from the other, until a whole series have died from pneumonia. Furthermore, there are physicians who have recorded a case of pneumonia traceable to a previous one, and no doubt there are conditions under which this might be observed as directly and as convincingly as one observes the contagion of smallpox. During 1904 and 1905 seventy-six cases had definite statements made concerning the source of contagium, and out of the seventy-six, sixty-four showed that pneumonia was contracted while nursing a case of pneumonia, or while otherwise in contact with pneumonia patients.

Bearing on the communicability of pneumonia, there is an interesting paral-

lel to tuberculosis. The greater number of cases in each disease is preceded by the same predisposing influences, "bad cold" being the leader, "influenza" second, and "bronchitis" third. Both diseases attack the same classes of occupation showing partiality to housework, farmer, laborer, student, in the order named. Thus pneumonia, identified with tuberculosis in being seated in the lungs, caused by a germ, finding debilitating or depressing causes favorable to its contraction; keeping pace with the high mortality rate of tuberculosis, and responding remarkably to the application of modern out-door treatment—all these factors so similar to tuberculosis are certainly significant, and point unmistakably to the similar communicability of pneumonia. Against them, the mere testimony that you, or I, or any individual practitioner has not traced one case to another, seems to me to have little weight.

I strongly believe therefore, that it is not only wise and safe, but that it is beneficial and necessary to practice restrictive measures in cases of pneumonia. Just what restrictive measures, we can only say from our experience in parallel conditions.

The State Department of Health, as you doubtless already know, has made definite recommendations, and I feel confident that if they were faithfully observed, we would make a perceptible headway in getting control of this disease. Because pneumonia is likely to be spread through the discharges from the air passages, the precautionary measures center around that fact and the destruction of the sputum; as, for instance, the isolation of the patient, together with nurse; the prompt and complete disinfection of all discharges from mouth or nose, as well as disinfection of all clothing and articles likely to be soiled by such discharges, and the final disinfection of the room. Not only have I

an abiding faith that these will do for pneumonia what placarding, isolation and disinfection have done for diphtheria, and scarlet fever, but I believe it is our duty to enforce precautionary measures as widely and as speedily as it can be done; we are the keepers of the public welfare, and we owe them this much intelligent service.

Pneumonia has been on the list of reportable diseases since 1904, and the official reports to the State Department for the three years, 1904, 1905 and 1906 are compiled and the statistics available for study. I wish to put before you some of the results of these compilations, and I would ask you to what extent they are reliable, to what extent they are significant, and what some of your conclusions are.

The first conspicuous fact that confronts us is that for a large proportion of cases of pneumonia we have recorded only their personal description and date of their death. These facts we obtained from the vital statistics division of the Department of State where death certificates are kept on file:

In 1904, out of 3,790 cases of pneumonia, 1,273 were obtained from that source.

In 1905, out of 3,227 cases of pneumonia, 1,544 were obtained from that source.

In 1906, out of 3,400 cases of pneumonia, 2,418 were obtained from that source.

What does that signify? It means that for about one-half of the cases of pneumonia reported during those three years, we would not have had any record whatsoever, had there not been a rigid law compelling the registration of every death with the Secretary of State. It means that for fifty per cent of the cases of pneumonia which we know actually occurred, there was no coöperation by the attending physician with the local health officials, and with

the State Department for the restriction of the disease; and it means that if individual physicians exercised precautionary measures, they failed to give the State Department the benefit of the same for the purpose of the study of this disease from the point of view of preventive medicine. Our reports show only a small percentage of the cases to have had the recommended restrictive measures observed. They were carried out as follows:

Year.	Total No. Cases.	Isola- tion.	Disinfection of Room	Sputum
1904	3,790	698	987	1,191
1905	3,237	703	1,047	1,030
1906	3,400	990	1,479	1,316

In addition, let me read to you some of the correspondence received in our department just during this last week, bearing on the delinquency of physicians:

1. Dear Sir: In accordance with your request asking me to make final report on the case of *****, I wrote to Dr. ***** to give me certain data, but up to the present time I failed to receive an answer. So, I hope you will take the matter up with him and make him understand the necessity of reporting such cases.

2. Dear Doctor: This case was not reported to me by the physician. I knew that this man died but did not know the cause of death until I got word from your Department. He was a single man and lived alone. I did the best I could to fumigate the house and bedding, and do not think there will be any danger of the disease spreading.

3. Dear Doctor: I called up the doctor, as the case was never reported to this office. He said he signed the certificate pneumonia to cover up the fact that he died of *syphilis*. The house was not fumigated and was never reported to me.

4. Dear Doctor: I have no record of the case, go for the doctor.

5. Dear Sir: Yours received. No case of pneumonia has been reported to me. I do not believe that there has been one.

6. Dear Sir: Doctor ***** did not notify me of this case. After the above was sent me I investigated and found that the family had moved out about a week after his death and the house has been vacant ever since and is locked up, and I do not know where the family has gone.

Hundreds of such statements are on file in our office, so that we are forced to believe that in too many instances physicians do not observe *any* precautions whatever with the patient's sputa; in too many instances they do not take all the precautions they should; and even where they are progressive and faithful in that matter, they fail to recognize the local health authorities, so that the physician's valuable experience expires with his individual interests.

In short, no person can say how many cases of pneumonia actually occur in Michigan. That they annually outnumber the *reported* number by hundreds and hundreds, we are forced to believe. And all this, in spite of the fact that pneumonia is a germ disease, and kills more people in Michigan in a year than all the other communicable diseases put together, barring tuberculosis.

This fact is a shocking commentary on the fitness of the medical profession for the responsibilities they have undertaken. Gentlemen, when we received our diplomas to practice medicine, each and every one of us professed the spirit of its noble calling, to do the best we could for the cure and prevention of sickness and suffering. The physician is by the very nature of his work thrown in a position where he must guide people to good health; it is his especial opportunity to mould public opinion, by individual instruction from patient to patient, from family to family. As leaders in preventive as well as curative medicine you have the education of the people under your control. Preventive medicine is not a fad or a fancy, but a well recognized fact today, and why we should be so far behind some other na-

tions in recognizing this fact I cannot understand. The Chinese pay their doctors to keep them well. What you preach and what you practice the people will accept; but what the State Department of Health recommends and you fail to practice, the public will not accept or follow. Report your cases of pneumonia promptly to the local health officer of that jurisdiction where you are attending a case; give him full data regarding the sanitary precautions exercised during the sickness of the patient; let him know when the case is over, so he may comply with the law, disinfect the premises and make an intelligent and full report to the central department at Lansing. If *you* do not support by every act and word the requirements of the public health laws, both natural and statutory, if *you* do not in your daily practice take pains to establish among your patients an accurate knowledge concerning this disease, how do you think that *they* will support and observe the precautions necessary to restrict and prevent pneumonia?

An Analysis of 832 Cases of Scarlet Fever, With Observations of the Diagnosis and Treatment of the Disease.—BARLOW studied the above cases during a recent epidemic extending over a period of eighteen months.

He says the diagnosis of scarlet fever is not always the simple affair which many appear to think it is. The mistake most often made was too much attention paid to the presence of a rash, and the character of the rash. Scarlet fever is a disease with three main characteristics—a definite rash, a definite sore throat, and a definite condition of the tongue; but it must be remembered that every sore throat is not scarlet fever, every strawberry tongue is not scarlet fever, and above all, every erythematous rash is not scarlet fever, nor indeed is every scarlet fever rash erythematous; these three signs must be considered in relation to and in conjunction with one another. Very often the rash simulates measles, but the distribution and accompanying symptoms are dif-

ferent. Again the condition of the tongue and the rash bear a definite relationship to one another; the tongue is furred while the rash is out, the tongue is strawberry when the rash has faded. One does not expect to find a brilliant rash with a strawberry tongue; indeed in the vast majority of cases one can tell from the state of the tongue the day of disease. Some doctors, if they do not see the rash, will not diagnose scarlet fever, although the throat and tongue are typical. The rash only lasts a few hours in some cases; on the other hand, scarlet fever is often erroneously diagnosed when an erythematous rash alone is present, and there is no sore throat or tongue.—*Practitioner*, Dec. '07, pg. 837.

Give not only your *personal and individual* co-operation for the prevention of this disease, but also your *combined* support. Let the community understand that as a body of physicians, as an organization, you actively support the work, intent and ideals of the public health administrators of your proper community.

For the carrying out of preventive measures not only during sickness from pneumonia, but to prevent its contraction; for the practice of hygiene of the mouth, nose and throat to keep them clean and free from local debilitating accumulations of mucous secretions; for the prompt and effectual treatment of bad colds; for advice against exposure, influenza, bronchitis; for the observation of precautionary measures during sickness with especial emphasis on the disinfection of the sputum; for advice in all these matters, and for the education of the public and eventual control of pneumonia, we look to the physician, and the county medical society.

In cases of suspected iodoform poisoning a ready test for the presence of iodine in the saliva consists in adding a little calomel to it, when a yellowish precipitate of mercuric iodide will result.

DISEASES OF JOINTS.*

H. E. RANDALL, M. D.,

Lapeer.

The bones of the body develop from certain bone centers. A study of the development of bone by the Roentgen Rays has made many changes in the conception of the process. These bone centers coalescing with other centers form certain bones which have been given definite names—and whose ridges and processes and grooves are the bug-a-boo of the medical student. These separate bones are connected to other bones in certain definite ways. In the skull the bones dove-tail to each other by their serrated edges. In other parts of the body the bones meet each other by articulations which admit of a variety of movements from sliding and hinge to that of a ball-and-socket joint. The bones at the articulations are held in their proper places by strong ligaments and the action of muscles. The joint is lubricated by a synovial fluid, secreted by the synovial membrane, a structure that partially covers the joints. The peculiarity of attachment of the synovial sac accounts for many of the physical or clinical phases we see when the joint or the contiguous structure becomes diseased. We will use as an illustration the knee, because it is the most frequently affected joint in the body. It will be noted by observing a section of the leg through the knee joint, that the attachment of the synovial sac is below the epiphyseal line. It is thus possible that a disease originating in the epiphysal line may perforate or may be reached surgically without entering the knee joint.

For the purpose of this paper I have

divided diseases of joints into six divisions:

1. Joint disease, simple synovitis, without germ infection.
2. Acute synovitis due to germ infection.
3. Chronic disease due to germ infection. Tuberculosis and syphilis and other diseases.
4. Joint disease due to so-called disorder of metabolism.
5. Joint disease due to nervous disorders.
6. Disease due to mechanical derangement.

Under our first heading of joint disease we find cases due to injury to the joint, a blow, dislocations, sub-luxations and fractures extending into the joint. In these cases there will be an accumulation of clear yellowish synovial fluid. There is no redness of surrounding parts, there is no heat of the local parts and there is no general fever. The fluid in the joint is clear and does not contain pus. We find the patella floating and by pressing upon it we get the familiar click. We find fluctuation in the joint. A peculiar feature in a well-filled knee-joint is the filling of the upper recess of the synovial sac. A valuable point might here be given. There will occasionally be seen a case complaining of swelling and tenderness around the joint in which the trouble has nothing to do with the joint itself. In these cases there is absence of a

*Read before the Seventh District Society, October 24, 1907.

floating patella and the position of the leg is different from joint trouble. The knee is straight or extended, while with effusion into the joint the knee is flexed. It is necessary to recognize this case, because if you do not, you may infect the joint and the patient lose his leg and perhaps his life. In effusion of the joint, unless pus be present, as a rule it is best not to aspirate, for fear, even under the most careful asepsis, of infecting the joint.

Under the second heading—Acute Synovitis, due to germ infection, we have those cases due to gonococci, the common pus germs, and those of the epidemic fevers. Those due to influenza have a tendency to a plastic or obliterating type. Pneumococci are usually suppurative. Typhoid arthritis is more severe in the mono-articular than in multi-articular infection.

In gonorrheal cases the symptoms depend upon the condition of the urethra. If the gonorrhea is acute, the joint trouble has an acute course. In chronic urethritis the type is that of more sub-acute joint trouble. The condition of the joint varies from a turbid serous exudative to a purulent formation. As a rule, the infection is purely gonococcal, but other specific germs may be demonstrated. These cases should be treated by rest and fixation and anodyne application. Should pus form, the joint should be opened and drained. The urethritis should be treated according to the condition of the urethra, avoiding excessive or heroic measures. As once said, it does not pay to sand-paper the urethra. The disease does not respond to the salicylates, although they are usually given.

In cases of septic joint we need not take up theoretical consideration, but the joint must be opened, in a manner which I intend to speak of later. In regard to septic conditions a point should be mentioned at this time. An osteo-

myelitis always starts in the marrow of the bone and any extreme pain in the bones, with or without swelling, should always suggest the possibility of osteomyelitis. This requires the same treatment as any acute suppuration, namely, evacuation. Do not use the curet, but give a good, free opening.

Chronic Cases. Tubercular Joints.

In regard to this disease some points in pathology must be borne in mind. Tuberculosis does not begin in the joints, but always in the epiphysis of one of the bones forming the joint. Experimental work has shown that the miliary type may be inoculated into animals, causing death by general miliary tuberculosis. In joint disease in animals traumatism must be produced and the animal inoculated with the tubercle, and this is supported clinically by the fact that a joint lesion is rarely the primary focus in the body. In operating on tuberculosis cases it is very difficult to recognize the limit of the process. But the natural tendency to cure, with the removal of a good share of tuberculous tissue, is about the only good thing one can say of the disease. With iodoform injection into the joint I have had no experience. Bier's congestive treatment is giving very satisfactory results where it has been used.

Nervous Cases. Charcot's Joint.

This peculiar condition may affect knee, elbow, or hip. In quite an experience with great opportunity for observation, I have seen but one case of Charcot's joint. The case was thought by several physicians to be tuberculosis, but there was absence of pain and the patient delighted in showing the various movements which the joint had. I must confess it jarred by nerves not a little. In this particular disease there is no

pain, or very little pain, and the relaxation of the ligaments allows the joint to be moved in almost any direction, hyperextension and lateral motion. The swelling of the earlier stages disappears after months or even years. This patient, by strapping two sticks to his leg, is able to get some use of it.

The next division of joint diseases includes those due to disorders of metabolism. On this subject there is a division of opinion as to the classification.

Chronic articular rheumatism, rheumatoid arthritis, arthritis deformans, etc., are the names given to the various conditions. Hoffa of Berlin in a recent address before the Anglo-American Association of Berlin, has made a division between arthritis deformans and what he calls polyarthritis chronica progressiva in which the distinction is made that the latter, commencing in the small joints, rapidly involves the larger ones, with deformity of various kinds. Arthritis deformans shows a characteristic X-ray picture. In the beginning of the disease at the knee joint on the upper and lower end of patella are seen spur-shaped formations. The joint cleft is normal. This fact distinguishes it from polyarthritis chronica progressiva, in which a considerable atrophy of bones takes place daily. There is never the breaking down of the joint, such as occurs in chronic progressive arthritis, in which an obliteration of the joint cavity is the rule. Arthritis deformans never produces real ankylosis. In its early stages it is very hard to distinguish from acute or subacute infective arthritis. The only safe course is to remember that an acute rheumatic joint may result in a progressive joint disease. In this terrible disease the treatment by elimination, rest, exercise, heat and massage, you are familiar with, but a few cases treated by Bier's method have given good success. Chronic pro-

gressive arthritis begins in the synovial sac in contra-distinction to arthritis deformans, which begins in the bone, and the disease leads to tissue thickening and a growing together of the opposite sides of the joint. Treatment of this condition is as far as I know unsuccessful.

Injuries of joints due to a mechanical derangement are dislocations—subluxation, loose cartilage in the joint, and, we might add, fracture extending into the joint, and loose bodies of various kinds. For fear I am making this paper too long, and I have tried to touch only the important points, let me look over in a general way the treatment of the various conditions.

Acute and painful conditions of the joints require rest, heat and applications of anodyne. Sprains, and it is well known that most sprains mean small fracture at or near a joint, require strapping or bandaging of the injured portion, modified to meet existing conditions.

Operative Methods.

The joint must be opened when pus is present. In tuberculous cases the trend of surgery is not to open the joints for fear of a pyogenic infection on top of a tubercular one, with the difficulty mentioned above of not knowing when you have removed all of the tubercular foci. Dr. Phelps, of New York, now dead, brought into prominence the treatment of wiping out the joint dry and using carbolic acid followed by alcohol.

In mechanical conditions it may be necessary to open the joint and correct the condition, such as removal of loose bone and in cases of frequent dislocation it has been suggested that the capsule of the joint be reefed or the slack taken up by operative means.

In children after mechanical treatment

has proved unsatisfactory in tuberculous conditions, the synovial membrane may be removed with the idea of saving the epiphyseal line and producing ankylosis. I think with our advanced knowledge of joint disease that arthrectomy will be done less often in the future as not meeting the requirement of a scientific operation. The same is true of resection of joints, due to the tendency to conservatism and the success of the mechanical and operative treatment. Amputation may be required in desperate cases. In the cases of fibrous adhesions where manual movement is used, the object is to produce motion, but not so violent as to produce a fresh inflammatory reaction, which would make conditions worse than they were before. Good judgment is required to decide in these cases. In several cases by giving chloroform and using this method I have been able to give the patient a good arm or leg. Bear in mind that in fibrous adhesions in the knee that the posterior ligament and posterior cervical lateral ligaments are bound together with the fatty tissue at the back of the knee. Forcible extension may result in a serious damage to the tissues of the popliteal space.

Osseous union and fibrous bands may make so immovable a joint that it may be necessary to sever the connection and resort to Murphy's method for producing a movable joint. The bones having been formed so as to give as good a plane of articulation as possible and the removal of any body that would limit movement, a flap of aponeurosis covered with fat is turned in between the bones and stitched, followed by movements in the next week.

The dislocation of the semilunar cartilages of the knee joint occurs when the tibia is rotated outward on the femur with the knee slightly flexed. The treat-

ment of one of these knees, which lock so that the knee cannot be moved, is effected by reversing the process of dislocation. The knee is to be flexed rotating the tibia and pressing back the cartilage. The tendency to displacement may be prevented by using a sole higher on inner side of shoe, so that the weight is carried more on outer side of foot. A splint which prevents full extension, as well as lateral and rotary motion of knee will prevent this accident. Where the condition is troublesome the joint is opened and loose cartilage removed.

That there exist cases of hysterical joint I do not question. But it is not always a safe diagnosis to make. A case recently was seen by a doctor in this state. He made a careful examination and made an X-ray picture. The doctor recommended operation. She was then seen by several prominent men in the East, who made a diagnosis of hysterical joint. The pain continuing, another surgeon had a Roentgen picture made, and the first diagnosis was confirmed. The case was operated on, a cyst removed from the tibia and a perfect recovery ensued. It pays to be very careful in making a diagnosis of hysterical joints.

In treating tubercular conditions of the knee, fixation is the first essential. A treatment which has given great success is Bier's congestive treatment. This is applied by using an elastic bandage above the knee to produce a venous hyperemia, applied not over two hours a day. In order to produce only venous hyperemia the pulse must not be obliterated below the knee, and the treatment should be applied gradually, not over 10 or 15 minutes at the beginning of treatment. With injection of iodoform suspended in glycerine I have had no experience, but many report good results. As I said above, the natural tendency of the disease is toward cure.

THE CONSERVATIVE TREATMENT OF INFLAMMATORY PELVIC CONDITIONS.*

ROLLAND PARMETER, M. D.

Detroit.

Some one has made the statement that 56% of the cases presenting themselves to the gynecologist are of inflammatory conditions of the uterus and its appendages. Another author has placed it as high as 65 per cent. In smaller cities and in the country, naturally this percentage is not so high. In Detroit, at least, this form of disease is so plentiful that it can in truth be said to constitute the "daily bread" of the gynecologist. This, then, is excuse enough for the discussion of the various methods of treatment which should serve all who are engaged in this line of work.

Acute adnexal inflammation is usually the result of gonorrheal infection or septic abortion and in most cases should be a "Noli me tangere" for the practitioner. Absolute rest in bed for weeks is the treatment for cases of this kind, and it is the only treatment from which we may expect favorable results.

If we carry out this form of treatment together with the proper exhibition of narcotics and the use of external heat or cold, properly employed, according to indications, or until we can by bimanual examination determine the pathological conditions, we will be surprised at the completeness of cure in most of our cases.

There is no rule without an exception. There are cases of acute pyosalpinx in which, in spite of absolute quiet, the tubes increase so rapidly that operative

interference is absolutely necessary. I recall such a case, where at first the tube was scarcely larger than normal and inside of ten days, it had grown to enormous proportions, reaching almost to the umbilicus. In such cases the operation of choice is vaginal incision, and drainage through the posterior cul-de-sac.

The portio having been seized with tenaculæ and pulled well down, the pouch of Douglas is opened with a Paquelin cautery. Now, under the guidance of the finger, a pair of bent forceps or scissors is made to invade all parts of the abscesses and drained with a rubber tube well wrapped in iodoform gauze. Usually inside of fourteen days the cavity will be found closed.

I believe vaginal incision in these cases to be the correct one, and if properly executed carries with it very little danger. It is very seldom necessary in acute cases to interfere at all and I believe the interest of our patients will be best conserved by a let-alone policy.

There is probably not much difference in opinion among us upon the method of treatment of acute cases, but when we come to those of a chronic nature, no doubt there will be as many different points of view as there are gynecologists.

The clinical picture of chronic conditions varies greatly. Often upon bimanual examination we can scarcely distinguish any anatomical changes and again we may find a slight enlargement of the tube, together with adhesions to

*Read at the Saginaw meeting of the Michigan State Medical Society, May 15-16, 1907, and approved for publication by the Publication Committee.

its abdominal end which will test our ability to differentiate from an enlarged inflammatory ovary or a small new growth of the ovary. Nor can we always determine from the symptoms the severity of the process. There are patients with minor anatomical or pathological lesions who complain of the severest pains, while others with extensive changes have scarcely any pain at all.

I think I agree with most gynecologists when I state that "patients shall only be operated upon after conservative treatment has been faithfully and conscientiously carried out and the desired result has not been obtained."

With an increase of experience one will be the better able to say in what particular case we may expect good results. The age of the patient helps to influence us in our decision. Generally speaking, the younger the patient the more hesitancy will we have in interfering operatively. Those lacking in experience will better serve their patients by proceeding in all cases at first along conservative lines.

The word "treatment" as here used needs some amplification, for the less one "treats" such cases, in general, the better. The sovereign remedy here is absolute rest. This means, of course, in bed; the longer the better. If we have the patience to wait a month, or even months, we will be rewarded in many cases by seeing patients cured when at first the prognosis looked hopeless.

The enforcement of absolute rest in bed, in an institution surrounded by attendants, patients, and physicians who are accustomed to the all too prevalent custom of "doing something" and the lack of equipment and space necessary for the proper execution of certain lines of conservative treatment, is not an easy task, and I may say practically impossible, outside a privately conducted or state institution,

We may cut short the period of absolute rest to a great extent by the proper use of some of the means at our command. Hydrotherapy, although harmless, I believe does but little good. Massage, unless carried out with the utmost precaution and by one trained in such work, may do more harm than good. The use of pressure from within the vagina and from the abdominal surface, according to Pincus, I believe to be of great service, and it will greatly aid in shortening the period of absolute rest. But the greatest aid we have will be found in the proper use of superheated air. It is a surprise that its use has not been more popular in America. It is practically an American invention. Here again we have the humiliation of seeing this method brought back to us from across the water, after having been perfected and the proper limitations placed upon it. For a period of about three years, the Second Royal University Clinic at Munich has made use of hot air in the treatment of inflammatory pelvic conditions, and with an American apparatus. I must admit my astonishment at the results obtained.

Superheated air finds its greatest use in cases of old exudate, peri- and parametritis, yet will serve a good purpose in many cases of adnexal changes. I remember a patient with a very extensive parametritis, following septic parturition, who received no other form of treatment, and yet in the period of three weeks she made a complete recovery and left the clinic subjectively and objectively cured. I am not in a position to give definite percentages of cured cases, but I think I am safe in putting it as high as 80 or 90.

Some of these cases are only subjectively cured and may later come into the hands of gynecologists who relieve them permanently by means of an operation. Still, all patients cannot be cured by such conservative treatment. There

will always remain a certain number of patients who will require operation, yet even here conservatism has its place.

When the abdominal was the route of choice, the results were very decidedly inferior to those now obtained by the vaginal. My short experience leads me to concur in the choice of the vaginal whenever possible. The percentage of mortality with most operators is less by the vaginal than by the abdominal, but it is still too high, for we are dealing here with a condition which does not threaten the life of the patient. Henkel of Olshausen's clinic had a mortality of 4.2 per cent in 142 vaginal celiotomies and 10.3 per cent, in his abdominal cases. The technique is the simpler and the abdominal more easily learned. The vaginal procedure requires years of practice, beginning with the easier cases, and a wide experience to enable one to choose cases suitable for its employment. The slovenly operator can never do successful work through the vagina, particularly when the appendages have to be cared for.

I like Henkel's three methods of procedure: 1—The vaginal incision; 2—extirpation of adnexa alone; 3—extirpation of uterus and adnexa or the uterus alone. The first procedure is carried out only upon youthful patients or upon those in whom we wish to retain the menstruating function and who may be suffering unilateral or bilateral disease. This procedure gives the best results in pure tubal conditions or those in whom the ovaries are not involved such as pyo- and hydrosalpinx.

If we have determined that the ovary also is involved, then this procedure, incision and drainage, does not give good results. We can easily see why this should be true, for when an ovary is infected, because of its anatomical structure, the infection is from many foci. It is practically impossible to open and drain all these small abscesses. Foci not

so opened are likely to become active at any time. In all of the selected cases under my observation good results were obtained. Nor have I seen other accidents than in one case in the Munich clinic where there was an accidental wounding of a uterine artery. This was very readily controlled. A good procedure is to open the cul-de-sac with a Paquelin, then with a finger in this opening determine the size and location of the pelvic lesions and with it as a guide puncture and drain, making use of a pair of curved Pean forceps or blunt curved scissors.

The second procedure, the extirpation of the adnexa alone, without the uterus, is made use of in tuboövarian conditions, the old chronic cases in which energetic conservative treatment has been tried without result. Here, instead of confining our operation to an opening in the posterior cul-de-sac, we make use of an anterior incision as well. This incision gives us a better view of the field. In many cases it may be necessary to do a posterior colpotomy first. Through this incision the adhesions should be broken up, then having made an anterior incision the bladder is shoved well up out of the way and the peritoneum opened. Many times we can easily deliver the uterus through this latter opening and with traction upon it as far as possible, the tubes and ovaries are brought into view. With the parts now exposed to view we can carry out any desired procedure upon the adnexa. If the adnexal tumors are too extensive, a puncture will quickly reduce the size, so we may proceed. If we pull by means of forceps, we are apt to tear the organs and our field of view will be quickly obstructed with blood. Any desired conservative procedure may be thus carried out, such as resection of part of an ovary, of both the tube and ovary, or even the uterus if we so desire. In many cases we will have but one tube

and an ovary to deal with. The work having been completed we replace the uterus, doing a fixation if necessary, suture the anterior wound and pack the posterior cul-de-sac with iodoform gauze, if pus or adhesions have been encountered.

It is a mistake to say one is operating too much in the dark, for in truth the only part carried out without the aid of sight is the freeing of adhesions in the posterior cul-de-sac with the finger. The ligamentum infundibulo-pelvicum can always be brought into view by proper traction and retraction. A Suchardt incision may be necessary in un-

usually small vaginas.

Accidental injuries here to be feared are those of rectum and intestine, the ureters and bladder are scarcely ever in our way.

The third procedure, that of radical removal of tubes and uterus, together with parts of, or all the ovarian tissue, as may be necessary, is carried out in practically a similar manner. We may occasionally have to leave a clamp because of inaccessible bleeding points.

I believe in general, the vaginal route to be much the better one for inflammatory cases not amenable to conservative treatment.

SURGICAL OPERATIONS ON THE HEAD.*

L. S. GRISWOLD, M. D.,
Big Rapids.

Surgical operations of the head are, for the purpose of description, divided into Extra-cranial and Intra-cranial. They are also divided into operations for Traumatism and those for Disease. Extra-cranial operations for either traumatic or idiopathic lesions are usually so simple as to require but slight mention in this paper. The preparations for such procedures are of more importance than the operation itself. It is presumed that the most timid physician who carries a scalpel and needle in his armament, can dress and care for an incised, lacerated or contused wound of the head, as well as the most skilled surgeon, so long as he keeps the eternal truths of asepsis and antisepsis in mind and applies the proper technique to this end.

Idiopathic lesions of the scalp, such as cysts, congenital, acquired, and sebaceous, horns or dense epithelial growths, lipomata, papillomata, nevi, etc., are also of slight surgical importance, and have the right to a mention in this paper only by way of clearing the path for a description of the bolder procedures. Any doctor can take his scissors and trim away a papilloma, or with his scalpel button-hole the skin over a wen or cyst, and pry out the sac or even remove an epithelial horn by a V-incision, without fear of a troublesome hemorrhage, shock, or collapse. But the person who does these minor operations must scrub and shave the field, and wash with bi-chloride solution and alcohol or ether, or he must suffer the humiliation of having frequent troublesome and even dangerous complications follow. Any wound of the scalp, be it

*Read before the Osceola-Lake Medical Society, December 30, 1907.

ever so small, whether made by the surgeon's knife or by an accidental injury, may be the source of danger, unless made or dressed by a person with a keen sense of perfect cleanliness and antiseptis. With these principles firmly fixed in his mind and an intelligent idea of the technique for securing this object, he is well fitted to perform these minor operations, even though his armament may be very simple indeed.

Not so with the second division of the subject, intra-cranial operations. Here is a cavity which until recent years has been exempt from surgical invasion, except for injuries which caused fracture of the bony wall and pressure of the tissues within by the fragments, but for the last two and a half decades, this cavity has been invaded with nearly the same precision and boldness as the other cavities of the body. Large areas of bony wall have been cut away to expose tumors and to allow their extirpation. Abscesses have been searched for and have been found and relieved after multiple trephining. Foreign bodies have been fished out of the cerebral tissue at a far distant part from the point of entrance, and by these bold procedures occasionally a life has been saved which by the old conservative, "let alone" methods of treatment, would have been lost.

Among the traumatisms of the head affecting the intra-cranial tissue, which most frequently come to the civil surgeon, and hence interest him most, are injuries which crush the walls and compress the brain, and punctured and gunshot wounds, each of which requires almost invariably active interference by the surgeon. If the wall has been broken and the fragments are impinging on the brain substance, it is the unmistakable duty of the surgeon to trephine and pry out that bone. If this is done early, before destructive disease of the soft tissues has commenced, the most gratify-

ing results will frequently follow.

In the treatment of punctured wounds, caused by gun shot or otherwise, the Alpha and Omega of treatment is not antiseptis, but drainage as well: hence the old "let alone" idea of treatment has given away to active interference. It matters not whether the missile producing the puncture has lodged within the cranium or not, the trephine must be used to enlarge the opening: if small, to secure drainage, and if the missile is lodged within, the larger opening is doubly necessary, through which to explore for the foreign body, and if found near the wound of entrance, to extract it: but if found at too great a distance to be extracted at the point of entrance, then a counter opening should be made with the trephine through which to remove the body and also to act as a counter opening for draining the long septic track.

Punctures by nails, when the wound extends into the brain tissue, even though producing slight symptoms at first, are not safe to leave to drain through their own channel, since there is such a reasonable presumption that small spiculae of bone are carried into the meninges. Pus is almost sure to form from some cause and be illy drained through the small opening in the wall. It is much safer, therefore, to trephine in advance of the formation of pus and thus secure its free exit, should any form. Besides, by this treatment, spiculae of bone may be cleaned out, and the canal in some measure be antiseptised.

Surgical operations for idiopathic intra-cranial lesions are many, but the most common lesion to be encountered by the general practitioner is Suppurative Otitis Media, which I am sorry to believe calls for surgical treatment more frequently than it gets it. I have not infrequently been called in consultation in cases of this kind of inflammation,

from which the patient had been allowed to suffer untold agony for weeks, and where kind nature had been struggling to cure by necrosing through the mastoid process. In one case it had actually formed an opening through the bone and was freely discharging its pus. This is not only dangerous conservatism, but it imposes indescribable suffering upon the unfortunate victim.

In all such cases where pain in the ear is continuous, accompanied by chills and high fever, the drum of the ear should be examined through a speculum, and if found bulging externally and more opaque than usual, this membrane should be punctured. If a free discharge of pus or serum follows, the relief may be complete, but if involvement of the mastoid cells has already taken place, no time should be lost in opening down through the outer plate of the mastoid process and curetting out the diseased cells. This may be done by the most conservative surgeon without fear. After preparing the skin in the usual manner for all operations, a vertical incision is made over the prominence of the process, the centre of the cut corresponding to the centre of the auditory meatus, then a short, transverse incision backward from the middle of the perpendicular one. The integument can then be reflected out of the way. The periosteum should then be scratched away where the bone is to be perforated: then a gouge or trephine will quickly remove the thin shell covering the cells, after which a small bone curet can be advantageously used to remove the diseased cell tissue. This will furnish safe and absolute relief unless the case has reached the stage of brain infection.

Abscess of the brain is not an infrequent sequel of suppurative disease of the middle ear, or of purulent accumulations about the orbits or frontal sinuses. Those produced by sepsis from

the middle ear cause the larger per cent, generally believed to be about ninety per cent. They may be either cerebral or cerebellar, in the proportion of about four of the former to one of the latter.

The symptoms, in addition to those of general suppurative disease are varied according to their location in the brain. In general, it may be safely presumed that if paralysis or spasm of certain groups of muscles is present, or if coma or semi-coma makes its appearance, following the suppurative disease above named, brain abscess is formed and death is sure to soon follow, unless prompt relief is furnished.

It must be remembered, however, that an abscess in this region may be either acute or chronic, like those of other parts of the body, and often develops so insidiously as to obscure and delay the diagnosis.

Abscesses of the brain arising as a result of sepsis from purulent disease of the orbits, frontal sinuses, or nasal cavities are usually located in the cerebrum. The symptoms which should arouse the suspicions of the medical attendant as to the character of the true condition of his patient are paralysis or spasms of certain groups of muscles, disturbances of the power of speech, etc.

The commencing paralysis may, when first observed, be simply a pronounced anesthesia of an extremity. In two cases coming under my observation as a consultant, this appeared in the right hand, and within twenty-four hours had deepened into complete paralysis of both sensation and motion of the member. Paralysis or spasm of a single group of muscles indicates disease in their motor area, and paralysis following spasm in any one group of muscles is a characteristic symptom of disease in the central region. The problem then is to approximately locate the pus cavity from these distant symptoms.

It seems to have been abundantly

demonstrated that the convolutions around the fissures of Rolando and Sylvius are the centres governing the disturbances of motion, those around Rolando governing the extremities, and those of Sylvius governing speech. It becomes necessary, therefore, from a surgical standpoint, to be able to approximately locate the fissure of Rolando. Championiere gives the following lines for its location; which are perhaps as simple as any devised and accurate enough for all practical purposes. Draw a horizontal line directly back from the posterior border of malar process of temporal bone, 2 4-5 inches, A and B. From B draw a perpendicular line upward, 1 1-5 inches to C, then from C upward and backward to D, which shall terminate in the sagittal suture, 2½ inches behind the junction

of the coronal and sagittal sutures. This line from C to D will locate very closely the fissure.

The same writer says that where hemiplegia exists as the result of septic abscess, the trephine should be applied in the middle of the line on the side opposite the paralysis. If the loss of motion or convulsion is confined to the lower extremities alone, the trephine should be applied in the upper third of the line. Where the motor disturbances are in the upper extremities alone, the operation should be made opposite the middle and in front of the line. When the disturbances are of the power of speech, the operation should be made at the lower third and well in front of the line. The dressings and treatment of all are the same as before described.

THE ORGANIZATION OF A STATE ANTI-TUBERCULOSIS ASSOCIATION.

ALDRED SCOTT WARTHIN, M. D.

Ann Arbor.

Modern Medicine accepts the general proposition that tuberculosis is an infectious disease, preventable, and in its early stages curable. To such a revelation society at large can have but one answer: the pushing of an organized crusade against the disease and its ultimate extermination. The civilized nations have already undertaken this campaign. International Congresses have been held, International and National Societies organized, while state, city and local anti-tuberculosis associations are coming into existence rapidly, one after another, to swell the ranks of the forces opposed to mankind's most active enemy—the tubercle-bacillus.

In the State of Michigan no State organization has as yet been effected. In a number of the cities and towns anti-tuberculosis societies or committees have already been formed, and a number of the County Medical Societies have appointed committees of this kind, but up to the present time very little effective work has been accomplished by them. There are several notable exceptions to this, but as far as I have been able to learn the majority have done but little more than organize, and some of those started with enthusiasm have apparently died soon after birth. There is also an Anti-Tuberculosis Committee in the State Medical Association, but its

field of action has, likewise, been a limited one.

These remarks are not in any way intended as criticism of any of these local societies or committees, but only to show that we have not yet made, here in Michigan, the progress in the anti-tuberculosis campaign that has been accomplished by a number of our sister-states. And this failure of progress in this direction is, I think, due wholly to our failure of organization and the conducting of a broad and energetic campaign. The experience of some other states during the last few years has shown definitely that if any results are to be obtained in this fight, organization is necessary before any definite program can be carried into action. There should be no unnecessary expenditure of energy or resource, and any given field of operation should be effectively covered.

The local conditions in different states of the Union vary so greatly that it is not possible to fit any one rule or scheme of organization to all of them. Within certain limits each state or city must, therefore, work out its own plan of campaign. One general rule can, however, be laid down for all. This campaign is not for the medical profession alone, nor is it for laymen alone. Only in the proper co-operation of these two forces can a dignified and effective crusade be carried out. As put by Livingston Farrand, a "campaign planned and conducted by physicians alone remains dignified and ethical and entirely inefficient." This explains no doubt the inactivity of some of the medical society anti-tuberculosis committees. On the other hand a crusade initiated and planned by non-medical laymen lacks authority and conviction and almost inevitably takes up some "half-baked" idea ending in ethical confusion. I repeat again that a proper and effective campaign can be accomplished only by active co-operation of professional and lay-

men. And of the second class all branches of society should be represented. In our preliminary letter we asked that the local organizing committees be composed of a physician, leading minister or teacher, lawyer, president of the local women's club and a leading business man. In the completely developed societies it is desirable to push the division of interest as far as possible and to reach all classes of society.

It is true that the ultimate responsibility for the control of epidemics, as well as for the prevention and cure of disease in general, will always, and rightly, be thrust upon the medical profession. Members of the medical profession will, therefore, always be looked to as the proper leaders in this warfare, and such a responsibility we must accept. Only those members, who, false to the lofty ideals of the profession cannot see beyond the narrow mercenary aspect of the relations between themselves and their individual patients, will refuse to recognize their higher obligations to society.

The campaign before us is, at the beginning, chiefly an educational one. Elementary knowledge must be diffused; public opinion must be first interested, then aroused and finally educated into that enlightened state which will lead it to act wisely and not foolishly. It may not be amiss to say here that a similar educational need exists in the rank and file of the medical profession as to the necessity of early diagnosis, methods of treatment, adoption of preventive measures, etc. New laws are needed, and new institutions, and for the latter the necessary appropriations, new methods, more research, more teachers, and sometimes new officials. "Education of the public" is a very vague thing unless it can be made definite and tangible by a direct appeal to small social groups. The co-operation of the legal profession, of teachers, journalists, preachers, and

of humanitarians from all classes of society is absolutely necessary to the successful waging of this complex campaign. I think I have said enough to justify my view, that, although the initiative in the anti-tuberculosis fight should come from the physicians, through the State or County Medical Societies, State Board of Health or other professional organization, if it is to be at all effective, the campaign must be a co-operative one.

The plan which we hope to see carried out in Michigan consists essentially in the establishment in every town and city of the state of a local sub-association, the members of which are to be also members of the broader State organization. Local conditions can thus be met, and there will thus be developed all through the state local educational centres of greater effectiveness than could be secured by a State association built up simply of individual members scattered about irregularly. At the same time the State Association will have to deal with the broader questions and policies of the movement in so far as the state is concerned; and moreover it must remain an agent for furthering and aiding the local educational campaigns to be carried out by the local sub-associations. Such functions of a State Association may be briefly mentioned here.

1. **Literature.** Each State Association should authorize the preparation and distribution of leaflets or pamphlets especially adapted to the conditions within that state, and printed in the various languages spoken therein. These should be varied in content to suit the different classes reached by them. They should contain in concise, popular phraseology elementary knowledge of infection in general and tuberculosis in special, the general principles of hygiene, directions for consumptives and for those living with them, disinfection, etc. State

Association prizes may be offered to stimulate the production of leaflets best suited to the local needs.

The State Association may also undertake to place within the local libraries well-chosen books on tuberculosis and infection, or, at least, to suggest the purchase of such books, and to furnish approved lists of such.

2. **Lectures.** The State Associations should endeavor to control a corps of lecturers who are willing on payment of expenses or a small fee in excess thereof to attend meetings of the local sub-associations and give suitable lectures upon the subject illustrated either by lantern slides or by photographs. Such associations further should maintain a bureau by which suitable sets of lantern slides or mounted photographs could be loaned out for small fees sufficient to cover transportation and damage. The lectures should be given preferably by medical men because of the authority with which they can speak upon subjects pertaining to disease. In the large cities the local professional members of the association could take turns in giving such lectures. Summer open-air lectures of this kind have met with great success in some of the large eastern cities.

3. **Publicity.** A committee on publicity should be formed and its members pledged to successive activity in sending to certain newspapers short articles on tuberculosis and its prevention. Street car signs, placards, programs, tickets, etc., may be utilized in spreading the propaganda.

4. **Exhibit.** A peripatetic exhibit should be owned by the State Association and sent from one town to another under the care of the local sub-associations. This exhibit should be in part general and concerned with the nature of tuberculosis and the conditions favoring its development, its prevention,

treatment, etc. Pathological specimens, photographs, colored plates, charts, models, etc., will make up the chief part of such an exhibit. The state statistics and local conditions should be made a prominent feature and special emphasis should be laid upon the work already carried out in the state toward the betterment of conditions. State sanatoria should be fully represented by models and photographs. The co-operation of the State Board of Health in the preparation of such an exhibit should be sought; but its care and transportation will probably have to be left to the local committees. Such exhibits should always be free, in the most accessible part of the town, and, when possible, combined with "lantern talks."

5. **Legislation.** The State Association should serve as a center of agitation for the passage and enforcement of proper laws concerning registration, disinfection, anti-spitting, etc. Movements for the establishment of state sanatoria, tuberculosis wards in asylums, prisons, etc., free tuberculosis dispensaries, proper care of tuberculosis in alms-houses, etc., may all be initiated and prosecuted by the State Association. Active co-operation should be taken with the public health authorities in any movement tending to restrict or diminish the spread of tuberculosis.

6. **Conference.** As in the case of any state or national association, one of the most important functions of the broader organization is the annual conference or convention for the interchange of views and experiences acquired through the local work. Waste of energy is thus prevented and a unity of purpose is given to the general plan. With a group of earnest men and women in every town working along local lines and then coming together on broader state or national lines there cannot fail in time the awakening in each individual citizen of a

sense of personal responsibility in the great work.

Relationship to National Association.

—While the policy of the National Society for the Study and Prevention of Tuberculosis has been to stimulate the organization of state associations formed on similar lines, yet it does not regard the latter as under its control. Whenever a State Association has been organized under sound auspices, it is regarded as "affiliated," this action carrying with it the right of representation in the Advisory Council of the National Association and assuring the coöperation of the latter in all work that may be undertaken in a given state. This plan of procedure is a wise one in that it leaves each state independent to work out its problem according to local conditions and without regard to fixed rules.

Meeting for Organization.

Preparations for this meeting had been made by sending out about two months beforehand letters to seventy-five leading physicians throughout the State asking the appointment of a local committee composed in part of laymen, and that such committees should select delegates for a meeting to be held in Detroit on February 21st. In spite of the relatively short time for preparation and the unfavorable weather, an audience of over three hundred was present at this meeting. The following program was received with enthusiasm:

PROGRAM.

1. Address of Welcome.....Hon.
Wm. B. Thompson, Mayor of Detroit
2. The International Congress on Tuberculosis.....Dr. C. G. Jennings, Chairman of the State Committee
3. Tuberculosis in Michigan.....
.....Dr. F. W. Shumway,
Lansing, Secretary State Board of Health
4. The Modern Medical Conception of Tuberculosis
.....Dr. George Dock, Professor of
Internal Medicine, University of Michigan

5. The Anti-Tuberculosis Crusade.....
.....Dr. Victor C. Vaughan, Profes-
sor of Hygiene, University of Michigan
6. The Tuberculosis Problem in Detroit..
Dr. G. L. Kiefer, Health Officer of Detroit
7. The Michigan State Sanatorium for
Tuberculosis.....Hon. F. B.
Leland, President of the Board of Trustees
8. The Woman's Club as a Factor in the
Fight Against Tuberculosis.....
Mrs. Caroline Bartlett-Crane, Kalamazoo
9. The Work of Organization in Michigan
.....Dr. A. S. Warthin, Profes-
sor of Pathology, University of Michigan
10. Organization of State Association for the
Study and Prevention of Tuberculosis.
Adoption of Constitution.
Election of Officers.
Discussion of Plans.

There followed a free discussion of the need for an anti-tuberculosis association in this state, as well as of the functions in general of such societies. The constitution given below was then unanimously adopted. Eighteen of the thirty Directors were chosen, but by unanimous vote the selection of the remaining twelve was left to a committee consisting of Drs. Jennings, Dock, Kiefer, Shumway and Warthin. Inasmuch as the Board of Directors elects the officers of the Association it became necessary to postpone further action. After a discussion of the plan of work outlined for the society and the State Exhibit at the International Congress, the meeting was adjourned.

The Michigan State Association for the Study and Prevention of Tuberculosis is, therefore, born. Before it lies a broad field for the prosecution of one of the greatest and noblest of humanitarian movements—the crusade against unnecessary and preventable disease and death. The success of this crusade in our state will be wholly what we make it, and we shall accomplish nothing if we do not push ahead vigorously now. If in each one of the local sub-committees there can be found one man or woman who has the inspiration and who

is willing to recognize the burden of responsibility, then I am sure, we shall succeed in our campaign within this state, for the starting-point of effective work will be found in the devoted enthusiasm of such men or women who realize the higher obligation to society. At the end of our first year we should have a hundred local sub-committees with a state membership of over five thousand. Detroit, Grand Rapids and Kalamazoo should each furnish over five hundred members, and with the good beginnings already made in these cities this should not be a difficult matter. Then a peripatetic state exhibit of the most instructive kind may be started on its travels, literature adapted to the local needs may be printed and distributed, lecture courses given, and we in Michigan shall be doing our part in the great educational crusade that ultimately shall gain the victory, not only over tuberculosis, but over all infection.

CONSTITUTION.

ARTICLE I.

The name of this Society shall be the Michigan State Association for the Prevention and Relief of Tuberculosis.

ARTICLE II.

The objects of the Association are:

1. Dissemination of knowledge concerning the causes, treatment and prevention of tuberculosis.
2. Investigation of the prevalence of tuberculosis in Michigan and the collecting and publishing of useful information.
3. Securing of proper legislation for the relief and prevention of tuberculosis.
4. Co-operation with the public authorities, State and Local Boards of Health, the National Association for the Study and Prevention of Tuberculosis, medical societies, and other organizations in approved measures adopted for the prevention of the disease.
5. The promotion of the organization and work of local societies in all parts of Michigan.

6. Encouragement of adequate provision for consumptives by the establishment of sanatoria, hospitals, dispensaries and otherwise.

ARTICLE III.

The meetings of the Association shall be held at such times and such places as may be directed under the By-Laws.

ARTICLE IV.

Amendment of Constitution.

Propositions to amend the Constitution may be presented in writing at any meeting of the Board of Directors or of the Association. They shall then be referred to the Board of Directors for consideration and report. The Board of Directors shall report such proposition for amendment at the next meeting of the Association, when action may be taken; provided, however, that no proposition for amendment shall be voted upon without at least thirty days' notice of the meeting at which it is to come up for action, which notice shall be sent to each member and shall set forth the proposed amendment in full. An affirmative vote of two-thirds of the members present at such meeting of the Association shall be required for adoption.

ARTICLE V.

The names and residences of the incorporators are:

BY-LAWS.

ARTICLE I—Membership.

(a) This Association shall consist primarily of the members of the local sub-committees formed throughout the various cities and towns of the State of Michigan. The dues of such members shall be \$1.00 per year, fifty cents of which is to be paid into the treasury of the Local Association and fifty cents to the treasury of the State Association, through the Treasurers of the local associations.

(b) All other persons not belonging to local associations, but who are interested in the objects of the Association, shall be eligible to membership in the State Association. The dues of such members shall be \$1.00 per year.

(c) Upon the payment of \$25.00 at one time, any member may become a life member.

(d) Persons paying at one time two hundred or more dollars may be elected patrons, and shall have all the privileges of members without the payment of dues.

(e) The Treasurer's receipt will constitute the acknowledgment of membership.

ARTICLE II—Board of Directors.

Section 1. The Board of Directors shall consist of 30 members elected by the Association. The Board shall be divided into five groups of six each to serve one, two, three, four and five years respectively, the duration of office of the members of the first Board of Directors to be determined by lot. At each succeeding annual meeting of the Association six Directors shall be elected for terms of five years, and in case of vacancies in any groups Directors shall be elected for such unexpired terms.

Section 2. The Board of Directors shall make its own rules. The government of the Association, the planning of work, arrangement of meetings, the expenditure of moneys and all other matters pertaining to direction shall be in the hands of the Board to execute.

ARTICLE III—Election of Officers.

The Board of Directors shall elect annually from its own number a president, two vice-presidents, a secretary and a treasurer, who shall be the officers of the Association as well as of the Board. The Board of Directors may from time to time elect from outside its number such honorary vice-presidents of the Association as it may deem proper.

ARTICLE IV—Executive Committee.

The Board of Directors shall appoint annually an Executive Committee consisting of the President and Secretary, ex-officio, and of five other members of the Board, and to this Committee shall be entrusted all the executive work of the Association.

ARTICLE V—Quorum.

Seven Directors shall constitute a quorum of the Board of Directors.

ARTICLE VI—Meetings.

There shall be at least one stated annual meeting of the Association at a time and place to be fixed by the Board of Directors. Other meetings may be called by the Board at such times as it shall deem proper.

ARTICLE VII—Delegates.

Upon due notification of the Annual Meeting of the State Association the local branches are to hold meetings for the purpose of electing delegates to said meeting. The number of such delegates shall not be limited.

ARTICLE VIII—Local Associations.

The Constitution, manner of organization, plan of action, etc., of the local associations shall be determined by said local associations to meet the local conditions.

ARTICLE IX—Moneys.

The moneys received from membership dues and from all other sources shall be used for defraying the expenses of the Association and for furthering its objects under the direction of the Board of Directors.

ARTICLE X—Amendment of By-Laws.

The By-Laws may be amended by a two-thirds vote of the members present at the annual or a special meeting of the Association or of the Board of Directors; provided, that no proposition for amendment shall be voted upon without at least twenty days' notice of the meeting of the Association or of the Board of Directors at which it is to come up for action, which notice shall be sent to each member of the Association or of the Board of Directors and shall set forth the proposed amendment in full.

The Crystalline Lens in Health and in Cataract.—After a short history of the discovery of cataract, SIR WM. J. COLLINS takes up the development of the lens and explains such anomalies as coloboma of the iris and choroid, capsulo-pupillary membrane and persistent hyaloid artery. He finds, as a result of experiments, that the normal lens is about 70% water and 30% solids, with 2% residual ash. These percentages, together with the specific gravity of 10.30 remain nearly constant throughout life. At birth, the lens weighs about 120 mg., and gradually increases until at 80 years it reaches approximately 260 mg. The volume, according to Becker, increases from 155 cmm. at 20 years to about 270 cmm. at 60. The anterior-posterior diameter increases about 2 mm. and the transverse about 5 mm. between youth and old age. Inasmuch as the specific gravity remains nearly constant, increase in weight means increase in volume, due largely to equitorial expansion, the intracapsular circumlental space being thereby gradually obliterated. The prevailing teaching that healthy lenses become more solid as time advances is therefore fallacious. Progressive loss of accommodation goes hand in hand with increase in size, to which fact alone is due the phenomenon of presbyopia. The theory that the ciliary muscle becomes enfeebled is at variance with the condition of other muscles, and is not borne out by microscopic examination. Senile cataractous lenses are usually

smaller and lighter than normal lenses of corresponding ages, although the percentage of solids is relatively greater. If cataract was an evidence of premature senility, we would expect the opposite to be true. The theory that the so-called black cataract is due to infiltration of haematin into an opaque lens is probably incorrect. Much more probable is it that the pigment is formed within the lens substance itself by a process analogous to that which takes place in the skin, to which the lens is related embryologically. Cataracts associated with myopia are prone to develop slowly, as are also those beginning at the posterior pole or those whose striae have a concavity forward. The writer believes in hastening maturation by iridectomy, providing the coloboma is made large and extends well up the ciliary border. Otherwise the result is disappointing. The paper closes with an extensive classification of cataracts based upon etiology.—*British Medical Journal*, December 2, 1905.

In the treatment of hand and finger infections, it is very important to release from bandaging as much and as many of the fingers as possible, and as soon as possible. The habit of bandaging up immovably all the fingers, in the treatment of a lesion of some of them, saves the surgeon time but, except in short cases, it often cripples the hand by stiffening the fingers.—*Am. Jour. of Surg.*

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MARCH

Editorial

The compensation for the care of the indigent sick has always presented certain difficulties and until recently few solutions have been altogether satisfactory. The question was briefly discussed at the 1906 annual meeting and referred to the committee on contract practice for study. This committee delegated Dr. A. L. Seeley of Mayville, as a special committee, and he reported at the Saginaw meeting last year, the conditions as he had found them about the state and suggested a remedy.

The numerous suits between physicians and boards of supervisors, together with the constant discussions at county society meetings, afford ample proof that, at present, the profession is dissatisfied with existing arrangements, at least in those communities where the contract system prevails, as, according to the report of Doctor Seeley, is the case in 39 counties in the state. Formerly it was quite universal for the indigent to select their own physicians, the latter putting in claims for services rendered at the regular rates. The bills were frequently reduced by the boards of supervisors, and in some instances, these boards have, without consulting the profession, made out regular fee bills, as, for example, in Oakland county, where the fee is said to be \$2.40 for a

case necessitating a fifteen-mile drive. Rather than be browbeaten in this way, many physicians do not put in a claim for the work.

In at least 39 counties, the poor commissioners have been in the habit of canvassing the various townships and letting the poor work to the lowest bidder. This has not only introduced a belittling element into our professional work, but it has often been the cause of destroying the harmony which should exist among physicians who are neighbors. Furthermore, as the years have passed, the price paid has been gradually reduced until in some instances, a doctor will agree to look after all the indigent in his township, furnish medicines, surgical appliances and antitoxin, as well as examine any insane patients and treat small-pox, all for a sum, as low in some instances, as \$15.00 per year. In Midland county, it is said, the work at the poor farm was bid in at \$75.00 last year, while formerly \$500.00 was paid for the same service. Usually the man who is willing to contract to do work cheaply, does cheap work, and the result naturally is that the patients go to a better liked man who treats them as charity patients and says nothing about it. The contract man has little to do and to keep some one else from getting the work, bids it in the next year for \$10.00. This may not be universally true, but it is in certain specific instances of which we know, and surely it is the logical economic result of the system.

The sub-committee referred to above outlined a plan which would do away with this pernicious and degrading system—a plan which seemed a bit Utopian, but which has been successfully put into practice in two counties in the state.



How they solved this problem in Tuscola is now well known. Their success has attracted widespread attention in

many states, and has put Mayville on the map in the geography of medical economics. It was briefly described under "County Society News," last month, but deserves emphasis as an example of what a well organized county society can do.

The county society first became incorporated and then sent the following letter to the board of supervisors:

To the Honorable Board of Supervisors of Tuscola County: There is dissatisfaction existing in relation to the present method of rendering medical aid to the indigent poor of Tuscola county. First, among the people, because, by contracting with a certain physician to look after all the indigent cases in a certain township or district, they are robbed of the privilege of making their own choice of a physician, and are sometimes compelled to be treated by someone who is very distasteful to them and in whom they do not have that confidence and trust often so necessary to their comfort and satisfaction. Because of these peculiarities of people, a physician is sometimes called to care for and often does care for an indigent case for which he receives nothing because some other physician holds a contract for the township in which the patient lives.

With the candid desire of rendering these conditions more agreeable to all concerned, the Tuscola Medical Society has formulated a plan which, if adopted, it is believed will obviate the difficulty and make harmonious the relationship of patient, physician and supervisor.

The plan, simply stated, is this: Let the supervisors pay to our society an average sum each year, such sum to be based on what has been paid for the medical care of the indigent poor of the county for the past three years, and each member of the Tuscola Medical Society contracts to take care of all the indigent work that comes to him with an order from the supervisor.

Such a plan can cost the county no more for medical services than it has paid in the past. It will give to the poor patient the privilege of selecting the physician he would choose were he paying his own bills. It will tend to divide the indigent work more nearly equally among the several physicians of the county; and, at

the same time, it will put into the treasury of the County Medical Society a fund, a portion of which it purposes to use for the general improvement of the society and its members individually, thereby bringing, directly, a benefit to all the people of the county.

The plan was adopted by the supervisors and a contract drawn up and signed. In addition to the amount to be paid (about \$4,000), the county furnishes all antitoxin and agrees to recompense physicians for services in time of an epidemic of small-pox.

The plan has worked extremely well thus far, and in it is seen a solution of this vexing problem.



The Tri-County Society is also a pioneer in this line. That portion of the society (whose membership comprises the physicians of Wexford, Missaukee, and Kalkaska), residing in Cadillac, has made a somewhat similar arrangement, and the society is now receiving over \$1,000 for services for which an individual physician formerly received \$150. Each physician is doing practically the same amount of charity work as he did formerly, the society is gathering in a neat little sum each year and the ambitious in that city are discussing the possibility of a medical building—a possibility in Cadillac—a mere dream in many a larger city.



The trypsin treatment of cancer has been tried and found wanting. Launched upon the sea of the public press, as it was by Saleeby, months ago, it has been eagerly sought by the laity and credited with greater attributes than its originator, Dr. Beard, ever claimed. We have not a few times heard laymen criticize the medical profession because one of its number published an article so theatrically enthusiastic as Saleeby's,

and it must be admitted that such precipitate public endorsement was unwise; but the criticism should be aimed at the individual, rather than the profession at large.

As a matter of fact, the trypsin treatment has not provided a great advance in the therapeutics of cancer. Conscientious trials by clinicians have proven that cancer is probably no oftener cured by typism than by cancer-pastes, and not so often as by well-directed surgery. To be sure, it has been demonstrated that trypsin destroys cancer cells with which it comes in contact, but it has very little systemic effect in combating the disease; in short, it is practically a local medication, requiring to be injected into the diseased part in order to produce its fullest effects. Moreover, it must be used cautiously, because the products of a too rapid carcinomatous destruction cause severe toxemia and increase the patient's illness. Cases have been reported where injections were made remote from the site of growth and metastatic cancer promptly developed at point of injection.

The majority of reports indicate that trypsin hardly delays the fatal issue. It may at first produce remarkable retrogressions in cancerous lesions, but it seems seldom to inhibit metastasis, or to benefit the general condition. The profession, then, is not justified in using it in any but inoperable cases. Having thus far proven inferior to surgical methods, it should not be considered in operable cancer. If one cares to test its merits, it may well enough be used in hopeless cases. This should be the limitation of its use, until further research possibly gives us an improved method of preparation or administration.



The Ophthalmic-reaction of Tuberculosis. No medical topic has excited a more widespread interest during the

past year than has the new test for tuberculosis, the so-called Calmette reaction. Although not discovered by Calmette, it was he who first worked out the details of the technic and who showed that when one drop of a one per cent solution or suspension of tuberculin is instilled into the eye of a patient having a tuberculous lesion, a distinct inflammatory reaction results. It is necessary that the tuberculin be free from glycerine, as the latter of itself will cause conjunctival irritation. The test is a simple one, and can be made by anyone, no expensive apparatus being necessary. It remains only to be proven a reliable test in order to become of the greatest practical importance.

Many of the communications on the subject have been in the French and German periodicals. It is worthy of note therefore, that two of the most important articles in English, both of which have recently appeared, are by our members. Hutchings¹ has prepared an "ophthalmic disc" of 10 mg. of tuberculin which can be dissolved in one cubic centimeter of distilled water, thus readily giving a one per cent solution. If one drop of such a solution be instilled into the eye of a tuberculous patient, after three to 24 hours, there is slight discomfort with reddening and lacrimation. There is no rise in temperature. The reaction disappears in from 18 to 36 hours. Hutchings reports 20 trials. The reaction was positive in seven out of eight cases of tuberculosis, one case of tuberculosis of the kidney not reacting. In twelve non-tuberculous patients the reaction was absent.

Smithies and Walker² have written an exhaustive article giving the results of 242 tests. Of the 76 apparently normal adults, only two reacted, and on subsequent inquiry, one was found to have an old tuberculosis of the knee and the

1. *Therapeutic Gazette*, December, 1907.
2. *Jour. Am. Med. Assoc.*, Jan, 25, 1908,

other was not above suspicion. Eight clinically tuberculous patients failed to react, and ten clinically non-tuberculous gave positive results. Two of these latter were later proven tuberculous, but no lesions were demonstrable in the other eight. The great frequency of walled off tuberculosis in the apparently healthy would easily explain these eight instances.

A few instances of injury to the eye as a result of these instillations, have been reported. Among those who have studied these cases is de Lapersonne who investigated eight cases of supposed injury and came to the conclusion that the test is not harmful, but that the complications which are sometimes seen would make a most careful examination of the eye necessary before the tuberculin is used.

It is perhaps too early, at the present time, to say that this new test is a reliable one, but those who have had the most experience with it seem of the opinion that it will prove a valuable adjunct to diagnosis.



Do not forget to draw your pay for registering births during the past year. According to the provisions of an amendment to the law regarding the registration of births, passed on June 27th, 1908, physicians are entitled to a fee of fifty cents for each birth certificate which has been properly made and filed within ten days of the birth.

Call on the registrar of each township where the records have been filed for a blank, fill it in and have it certified. Send it then to the Secretary of State, Lansing, and a voucher on the County Treasurer will be mailed you. The list is to cover all certificates filed between June 27th, 1907, and April 1st, 1908.

The compensation is just. The bill providing for it was introduced at the instigation of the Washtenaw County

Society, and passed by the influence which the members of the State Society brought to bear upon their representatives. It means from \$20,000 to \$25,000 annually to the profession, and if collected will several times over pay the membership fees to the county, state and national organization of all our members.

Book Notices

Modern Medicine. Its Theory and Practice. In original Contributions by American and Foreign Authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England; formerly Professor of Medicine in Johns Hopkins University, Baltimore; in the University of Pennsylvania, Philadelphia and in McGill University, Montreal. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume III. Price per volume: cloth, \$6.00, net. Lea Brothers & Co., Philadelphia and New York, 1907.

The third volume of this splendid treatise completes the infectious diseases and diseases of the respiratory organs. Part II. on the respiratory tract takes up but 400 pages, as lobar pneumonia and tuberculosis are considered among the infectious diseases.

The first four chapters cover Malta fever, beri beri, anthrax, rabies, and glanders. The fifth chapter, by Cole, is an important one on gonococcus infections. Each year has seen the widening of the field of affections caused by this organism, and Cole has brought the whole subject up to date in an admirable manner.

The most important subject dealt with in this volume is tuberculosis. It is treated by Baldwin, MacCallum and Brown in five chapters comprising 300 pages. Every phase of the topic is fully discussed, and these contributors deserve special praise for the excellence of their work. It is one of the best expositions of the subject in English.

Osler and Churchman discuss syphilis in a particularly readable manner, old facts being presented in a new and altogether delightful way. "Infectious Diseases of Doubtful Nature," by Boggs, treats of febricula, glandular fever, infectious jaundice, military fever, Rocky

mountain fever, psittacosis, foot and mouth disease and milk sickness.

Part II. is introduced by an exhaustive and valuable chapter by T. R. Brown on the mechanics of respiration and of the respiratory diseases. "Hay Fever," by Dunbar, is a chapter deserving praise. Other good chapters are those on emphysema and broncho-pneumonia by Hare, and pleuritis by Lord.

This volume maintains the high standard of the first two. It is to be regretted that there is not more uniformity in the matter of references to the literature. To include long bibliographies is manifestly out of the question, but the inclusion of the main references as foot notes would take but little space and would be immensely valuable.

Taken as a whole, the monographs which have appeared in this system are all on a high plane, making it a most valuable addition to any library. Moreover, they are remarkably uniform and maintain their proper relations to one another, so that the whole work will be well worthy the name of "system of medicine."

A Text-Book of Physiology: for Medical Students and Physicians. By William H. Howell, Ph. D., M.D., LL.D., Professor of Physiology, Johns Hopkins University, Baltimore. Second edition, thoroughly revised. Octavo volume of 939 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$4.00 net; Half Morocco, \$5.50 net.

A rational system of medicine is based principally upon anatomy, pathology and physiology, although the latter science has had a less prominent part in the development of clinical medicine of the present day than its importance should have demanded. Clinicians are recognizing this fact more and more, so that practice is becoming more and more intimately connected with physiology. The time of the practitioner cannot be spent to better advantage than in reviewing physiology, and it can be done with no book better than with this. A thorough review of the latest knowledge along this line cannot but improve the practice of any man.

In revising the text of this edition, Howell has kept constantly in mind the two guiding principles noted in the first edition, namely, simplicity of style and limitation of the material selected. There are few men who possess the keen judgment required to justly es-

timate the value of conflicting theories in science. The science of physiology is replete with these conflicting theories, and Howell has been able, from his long experience as a teacher, to sift the evidence and emphasize the conclusions that are most justified by experience and observation.

The text is divided into nine sections, treating, respectively, of muscle and nerve, the central nervous system, the special senses, blood and lymph, circulation, respiration, digestion and secretion, nutrition and heat regulation and reproduction. The latter section is not usually found in text books on physiology. An appendix contains two sections on proteins and their classification, and diffusion and osmosis.

A knowledge of histology is presupposed and no matter pertaining to it has been inserted, as in many books on the subject. References are given to the classical monographs on each subject, and to the papers which themselves contain extensive bibliographies. Enough of the historical development of each subject is given to orient the reader.

A careful reading of much of the text has inspired the reviewer with a desire for further knowledge. One constantly realizes both the vast knowledge which we already have and the fertile fields yet to be tilled; that physiology is a science constantly growing.

It is a book from which everyone can gain much, and should be widely read by the profession. The author is known as a lecturer whose style is marked by sustained argument, lucidity and grace. He is delightful to listen to and his book is delightful to read.

The Internal Secretions and the Principles of Medicine. Charles E. de M. Sajous, M. D., Fellow of the College of Physicians of Philadelphia, etc. Volume II. with 25 illustrations. F. A. Davis & Co., Philadelphia.

It is difficult to review with fairness a book of this character. A perusal of the introduction discloses that the writer had hoped that the first volume would serve scientific investigators in physiology, pathology, and physiological chemistry as a guide to a speedy elucidation of the complex problems of the body functions in health and disease, and the effects of drugs thereon; but the scientists having disappointed him by persisting in working along

their own lines and in their own way, Dr. Sajous has been forced to undertake this great task himself. A list of 96 of the most important conclusions which are stated for the first time in this book suggests that in the past four years the author must have done an immense amount of difficult scientific work, for he is very emphatic in condemning the practice of theorizing from insufficient evidence. Study of the methods of research employed, as revealed in the various chapters, is not, however, convincing as to the value of the conclusions. Having collected such scientific data, often very meager, as are available regarding the ductless glands, Dr. Sajous proceeds to elaborate more or less plausible hypotheses regarding the relations of the gland secretions to various vital functions; accepting as he goes each hypothesis as a proved fact and elaborating again from it until finally he has built the ductless glands and the pituitary body into the "adrenal system," which normally regulates and controls all vital processes and determines immunity; while disturbances of its function are of fundamental importance in all pathogenesis. From this point he proceeds to a long discussion of the action of the various drugs on this "adrenal system," and then to a classification of diseases and an outline of treatment according to the theory of disturbed function of these glands. We find, for instance, that tetanus, epilepsy, eclampsia, rabies, gout, migraine, neuritis, etc., are due to hypoactivity of the adrenal system, while arteriosclerosis, angina pectoris, cerebral hemorrhage, diabetes mellitus, and others are due to its hyperactivity. The book is ponderous, and there are very numerous annotations to the text; referring one, however, only seldom to scientific literature, and very often to the "author's conclusions."

The mixture of scientific truths, half-truths, and theory is so intimate that it is often difficult to distinguish them.

It is only just to say that Dr. Sajous seems to have studied the literature of his subject thoroughly; that his reasoning is often very ingenious; and that in the present stage of our knowledge it is impossible to deny that some of his conclusions may prove correct; but few are likely to accept the book as the important revelations of new principles in the theory and practice of medicine which the author and publishers seem to consider it,

A Text-Book of Practical Diagnosis. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M.D., Professor of Therapeutics in the Jefferson Medical College of Philadelphia. New (6th) edition, thoroughly revised and rewritten. Octavo, 616 pages, with 203 engravings and 16 full-page plates. Cloth, \$4.50, net. Lea Brothers & Co., Philadelphia, 1907.

The sixth edition of Hare's well known text book on diagnosis has appeared. It is a companion volume of the Text Book of Practical Therapeutics, a new edition of which recently appeared. The two make a very practical working set.

The chapters are divided so that some take up regions of the body, as "Face and Head," "Hands and Arms," "Feet and Legs," "Skin," etc. Others discuss prominent symptoms as "Headache and Vertigo," "Coma," "Convulsions or General Spasms," "Cough and Expectoration," "Pain," etc.

In using the usual text books on medicine a tentative diagnosis must first be made and that subject looked up in order to ascertain if the symptoms described correspond with those presented by the patient. This book is arranged so that the diagnosis may be reached by grouping the symptoms. For example, a "claw hand" may be recognized. To what is it due? To (1) disease of ulnar and median nerves, (2) disease of the cells in the spinal cord, (3) disease of the cells in the hand area of the cerebral cortex. Each of these causes is discussed at length and a differential diagnosis arrived at. This analytical method is pursued throughout. The style is clear and concise.

The book is a useful one and will not prove a disappointment.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert Holmes Greene, A.M., M.D., Professor of Genito-Urinary Surgery, Medical Department of Fordham University, and Harlow Brooks, M.D., Assistant Professor of Pathologic Anatomy, University and Bellevue Hospital Medical School. Octavo; 536 pages, 292 illustrations. Cloth, \$5.00. Philadelphia, W. B. Saunders Co., 1907.

With few exceptions we find nothing new or wonderful in this work to commend itself to either physician or surgeon and our belief is that the authors have attempted to cover altogether too much ground in the 536 pages of the volume. Such a chapter as number five, for instance, should be eliminated from a book

of this kind. The practitioner of to-day with his reasonably well-stocked library does not consult this sort of work for the embryology, anatomy, etc., of the kidney; nor is he apt to be satisfied with the information he can obtain in chapter eleven, which seeks in 25 pages to treat of Bright's disease from its pathology to treatment, inclusive.

Space is wasted in too many instances through the insertion of illustrations of instruments and apparatus with which everyone is familiar or with which no one can become familiar unless he sees and handles them for himself, a fault to be justly found in many modern books: we refer to cuts of such things as Bigelow's Lithotrite and Evacuator, Otis' Meatotome, Valentine's Irrigating Outfit, whalebone guides, etc. We have seen these in book after book since the beginning of time and we can always find them in the catalogues of every surgical instrument house in the country. It appears to us always as an attempt to justify the statement that a work is "well illustrated." In one particular, this work is well illustrated: we refer to the excellence of the cuts of pathological specimens; indeed the specific pathology set forth is very good.

With the possible objection to the author's advice that in treatment of acute gonorrheal urethritis, it is wise to refrain from all local treatment until four to six weeks after the onset of the symptoms, we have no fault to find with the book; our chief criticism lies in the fact that it offers little to justify our active commendation.

A Text-Book of the Practice of Medicine. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College, Philadelphia. Eighth Revised Edition. Octavo of 1317 pages, fully illustrated. Philadelphia: W. B. Saunders Company, 1907. Cloth, \$5.60 net.

The eighth edition of Dr. Anders' text book on practice has lately appeared, with some additions as well as revisions. There are very few changes in the infectious diseases, except in so far as treatment of some of them is outlined. Under cerebro-spinal meningitis we fail to find a discussion of the anti-meningococcus sera; under differential diagnosis the text speaks of "tubercular" meningitis. On page 197 we meet with some very interesting data concerning the treatment of smallpox. After

stating some of the simple methods of treatment, the author says, "Occasionally a wild delirium may necessitate a combination of sodium bromide grs. xv with tincture of opium, minims v." It is questionable whether the severe delirium, such as we see in the first, or the pustular stage of variola, will yield to such a small dosage.

Under the head of vaccination it is deplorable to find the methods of technique that are described. The scraping of the skin and caustic potash application for removing the epidermis, should long have been relegated and more satisfactory and aseptic methods of linear incision recommended.

The chapter on parasitic diseases shows careful work. We are indeed glad to see some new plates, and indeed excellent ones, showing the cycle of the malaria parasite; they are reproduced from the Johns Hopkins Hospital reports. Just why relapsing fever should be placed after the parasitic diseases, such as taenia and pediculosis, cannot be surmised.

The chapter on diabetes is excellently written, although the author recommends the giving of alkalies when coma threatens. We believe he should not wait that long but distinctly recommend its exhibition during all stages of severe cases.

It seems that modern text book writers on internal medicine cannot wean themselves away from arthritis deformans or rheumatoid gout. The newer pathology on this subject should have been recognized in a text book revised as late as August, 1907, and the proper divisions, such as Goldthwaite and Nathan have established, should at least have been given recognition.

The chapter on gout is well written in the main, but is spoilt by the differential table distinguishing it from rheumatoid arthritis. This chapter is followed by one on lithemia. The most that can be said for it is that it is short.

Part IV, on diseases of the blood and ductless glands, should have received more consideration and space. We believe the author places too much reliance on arsenic in pernicious anemia, when he says that its value is analogous to that of iron in chlorosis. More careful directions in regard to nutritious feeding and fresh air, together with care of the digestive tract, should have been mentioned.

In the chapter on exophthalmic goitre, more stress should have been placed on substances

like thyroidin than devoting space to a prescription which benefited two cases of the author's "after persistent use for six months."

The section on diseases of the circulatory system is excellently written. It contains much of the newer work on cardiac arrhythmias, and would be faultless were some of the meaningless cardiograms and prescriptions omitted.

In part VII., diseases of the digestive tract have not been changed much from the early edition nor has the division on the urinary system suffered much alteration in the following division.

The remainder of the text shows careful work, though we believe that the chapter on heat stroke is involved and confusing. It would have been better to make a division, such as most recognized text books observe, between sun stroke and heat prostration under separate headings. The book is carefully indexed and well printed; the few illustrations are so good that they suggest the want of more.

A Treatise on Diseases of the Skin. For the use of advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Professor of Dermatology, Jefferson Medical College, Philadelphia. Fifth Edition, revised. Octavo of 1150 pages, with 267 text-illustrations, and 35 full-page colored and half-tone plates. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$6.00 net.

This one-volume treatise, consisting of 1,150 pages, with its profusion of excellent illustrations and plates, is set up in most attractive type, and substantially bound.

The author, who is so widely known to the medical world, has again thoroughly revised this excellent treatise. After four such thorough revisions as the author has made of this work, little, if anything, can be found in adverse criticism of the work, but much in commendation. He has put into it not only the results of his extensive experience, but, added to this, all valuable new material which has come from all parts of the world. Best of all, he has weeded out a great deal of obsolete material.

The first 129 pages are a descriptive treatise on the "Anatomy and Physiology of the Skin." ogy of subjective and objective symptoms. This is followed by a general "Symptomatology

with a most instructive classification of the elementary, or primary lesions, and consecutive or secondary lesions, each type being clearly illustrated.

The General Etiology, Pathology, Diagnosis and Treatment, both constitutional and local, are next taken up in a thoroughly up-to-date manner, much space being given to the newer, local measures, such as Radiotherapy, Actinotherapy, and High Frequency Current.

The classification of diseases is that of Hebra, with Crocker's modification, the author considering this combination the best for actual study, though it is as yet unsatisfactory; changes are forthcoming, as the pathology of some groups of diseases is more clearly settled.

The nomenclature of dermatological diseases is becoming less difficult because of better classification, ceasing to be a nightmare to the student; and its pathology is no longer a joke to the pathologist.

The description of the diseases is most thorough and clear, with complete references to the recent literature. The profusion of excellent illustrations, especially those on syphilis and small pox, add greatly, in a diagnostic way, to the interest of the text, a greater part of these being selected from the author's own collection.

Some of the newer diseases as Dhobie-itch, and Uncinaria Dermatitis or Ground-itch, are taken up in this edition. They have not appeared in previous editions, and are of added interest because of our new possessions in the Tropics.

The treatise as a whole is excelled by no other in completeness. It is, therefore, one of the best guides to the student in dermatology. The author and his assistants are to be congratulated.

International Clinics. Seventeenth Series. Vol. IV. Octavo, pp. 307, illustrated. Philadelphia, J. B. Lippincott Company, 1907.

The new editor of the International Clinics has more than maintained, during the past year, the high reputation of this series. The articles which have appeared have been better than ever.

The last volume of the year contains thirty original communications from men of authority. Among them one on the ophthalmology

reaction of tuberculosis by Calmette, and another on "Five Years' Experience with an Anti-typhoid Serum" by Chantemesse. Warthin, of Ann Arbor, contributes to this volume a paper on the comparison of the X-ray and arsenic treatment of leukaemia.

Woman. A Treatise on the Normal and Pathological Emotion of Feminine Love. By Bernard S. Talmey, M.D., Gynecologist to the Metropolitan Hospital and Dispensary, New York, pp. ix.-228, with 22 Drawings in the Text. Price, in flexible leather covers, \$3.00. Stanley Press Corporation, New York, 1907.

The author says, in his preface, that he has ransacked the libraries, for the past few years, for information on the feminine amatory emotions, and that the fruit of his labor is this medico-philosophical treatise. He has touched upon many topics in sexuality and the information seems reliable.

The Sexual Instinct. Its Use and Dangers as Affecting Heredity and Morals. By James Foster Scott, Washington, D. C. 8 vo., 465 pp. Price, \$2.00. E. B. Treat & Company, New York, 1908.

This is one of the cleanest and plainest of the books on this important subject which has appeared. It is intended for the laity and can be highly recommended. It should be widely read, and if read with the right spirit, should be conducive of much good.

The Correction of Featural Imperfections. By Charles C. Miller, M.D. Cloth, 5x7 in., 133 pages. Cloth, \$1.50. Published by the author, 70 State street, Chicago.

This little book contains several papers published in various medical journals by the author during the past year. Ninety pages are devoted to text and the remainder to illustrations. The description of the operations is couched in such a vague style that one is forced to the conclusion that he must send his patients to the author rather than attempt to remedy defects himself.

The Archives of Internal Medicine, which appeared for the first time in January, is edited by a publication committee of internists and

printed on the presses of the American Medical Association. In general make up, this new journal resembles the *Journal of Experimental Medicine*. The paper is excellent and the type good. The first number contains five original articles, including two by Michigan men: "Trichomonas Hominis Intestinalis," by Dr. Hugo A. Freund, of Detroit, and "An Experimental Study of the Action of Oil on Gastric Acidity and Motility," written jointly by Dr. D. M. Cowie of Ann Arbor and Dr. J. F. Munson of Sonyea, N. Y.

The subscription prize of the Archives is \$4.00, which should be sent to the American Medical Association.

County Society News

Antrim.

The annual meeting of the Antrim County Medical Society was held in Mancelona, January 8. The following officers were elected: President, Dr. J. C. Gauntlett, Elk Rapids; vice-president, Dr. F. S. Hoag, Alden; secretary-treasurer, Dr. L. L. Willoughby, Mancelona; program committee, Drs. C. V. Hinman, F. S. Hoag and William Evans; board of directors, Drs. H. A. Stewart, to fill vacancy; delegate to State Society, Dr. J. C. Gauntlett.

The matter of contract poor work was discussed and the following resolution adopted:

Be it Resolved, That the members of the Antrim County Medical Society refrain from entering into any contract with any Township or County Official for the care of the indigent sick, and that any member so doing shall forfeit his membership in the Antrim County Medical Society, and that the members of the Society refuse to counsel with such former member.

The society will meet the first Wednesday of January, April, July and October.

L. L. WILLOUGHBY, Secretary.

Barry.

At the annual meeting of the Barry County Medical Society, held December 19, 1907, Dr.

R. V. Gallagher, of Dowling, was elected president; Dr. F. G. Sheffield, of Hastings, secretary-treasurer; Drs. R. V. Gallagher, Dowling, C. H. Russell, Hastings, and J. W. Rigterink, Freeport, board of supervisors; delegate, Dr. J. G. McGuffin, Hastings; alternate, A. I. Laughlin, Woodbury.

F. G. SHEFFIELD, Secretary.

Emmet.

The first meeting of the year of the Emmet County Medical Society was held in the Cushman House parlors, January 14, 1908, with the president, Dr. L. W. Gardner, of Harbor Springs, in the chair. Nearly all of the members were present, and the meeting proved to be the most instructive and interesting of any held for some time.

The following program was carried out: "Operative Treatment of Hydrocele," Dr. Nihart; "Diseases Now Prevalent in Emmet County," Dr. Crotser; "Former and Modern Gynecology," Dr. Gardner; "Operative Treatment of the Thyroid Gland," Dr. J. Reycraft. Each paper was freely and ably discussed.

The following resolution was proposed and passed: "That previous statement regarding Dr. J. Pedden and the Lodge of Eagles, as published in the December Journal, was not in accord with said minutes of the meeting, but that Dr. Pedden was then practicing under contract with Eagle Lodge, which was contrary to a resolution of the society. But promising not to sign like contract after present one expires, he was retained as a member."

The society then adjourned to meet for a banquet at 7 p. m. After an hour's waiting, the members marched, to the strains of music, to the spacious dining-room, where a four-course lunch was served. Dr. John Reycraft, in his usual happy manner, presided over the aftermath.

G. W. NIHART, Secretary.

Manistee.

At the annual meeting of the Manistee County Medical Society, Dr. J. A. Christianson was elected president and Dr. Harlan MacMullen secretary.

Plans for the entertainment of the state society on June 24 and 25 were discussed and special committees appointed for making the

necessary arrangements. Dr. G. F. Knowles was appointed to represent the Manistee society at the meeting of the Committee in Scientific Work, February 6.

HARLAN MACMULLEN, Secretary.

Houghton.

At the regular monthly meeting of the Houghton County Medical Society, held at the Douglas Opera House, Houghton, Monday evening, January 6, 1908, Dr. Henry M. Joy, of the Calumet & Hecla staff of physicians, Calumet, read a very interesting and scientific paper on "Carcinoma of the Pancreas," with the report of a case. This paper was thoroughly discussed by Drs. N. S. McDonald, of the Quincy Mine, and W. K. West, of the Copper Range Consolidated Company. (Dr. Joy's paper will appear next month.)

The second paper of the evening, on "Early Diagnosis of Tuberculosis," by Dr. Robert B. Harkness, of Houghton, brought out many new points and emphasized many old ones, which with the discussion they provoked proved decidedly profitable. The Calmette reaction was dwelt on more at length by one of the leaders of the discussion, although having tried it on a series of suspected and undoubted cases, the result was rather unsatisfactory because of the doubtful purity of the tuberculin he used. In general, however, in those cases which reacted positively the intensity of the reaction was in inverse proportion to the extent of the lesion.

Dr. Leroy W. Childs, of Baltic, who led the discussion from the laboratory standpoint, exhibited a patient with the reaction still intact. This patient had very few and these only indefinite physical pulmonary signs, but bacilli had been found in the sputum. He reported a series of fifteen cases in which he had tried the reaction, and while he considered this a very small amount of material on which to form a decided opinion, and the length of time he had worked with it had been short, his results would justify him in concluding it of inestimable value.

Out of fifteen cases he had twelve positive reactions and in only six of which he could positively prove the existence of tuberculosis previously; one case of hip-joint disease in a child less than two years old, and another, a clinical case of dactylitis, were not positive,

but both of the patients cried so hard that the solution might easily have been washed out. In general his experience was that the intensity of the reaction was in inverse proportion to the severity of the lesions.

At the meeting held at the Calumet hotel, February 3rd, Dr. A. B. Simonson, chief of the Calumet & Hecla staff of physicians, read a paper on "The Complications of Pneumonia." Dr. C. H. Rodi and Dr. A. F. Fisher discussed the paper.

Dr. W. T. King, of Allouez, reported a very singular case of hiccoughs in a woman, which had persisted for fourteen weeks despite the application of all known remedies to relieve. A small abdominal tumor near Poupart's ligament being discovered, he performed an exploratory laparotomy, removing this tumor, which proved to be an infantile kidney. Immediately succeeding this operation the patient ceased hiccoughing. He was unable to explain the reason.

W. D. WHITTEN, Secretary.

Wayne.

At the January meeting of the Surgical Section, Dr. M. A. Fechheimer read a paper on "The Treatment of Chronic Gonorrhea."

Abstract.—Gonorrhea continuing longer than six weeks is classed as chronic. While the discharge shows gonococci copious irrigations of mild solutions of silver albuminates are to be used. Albargin (1 to 1000) gives satisfactory results. When gonococci have disappeared, mercury oxycyanatum (1 to 4000) is indicated as an irrigation, especially where there has been a mixed infection.

Urethrascope examinations should be made and localized lesions, if found, may receive their proper treatment. Frequently the lacunae of Morgagni are found inflamed. If but one or two are involved they may be treated with the galvano cautery, the electrolytic needle, the application of strong silver nitrate solutions, or by slitting open. If several are affected introduce full-sized sounds and massage the urethra. Alternating with this there may be applied to the upper wall of the canal a one to three per cent solution of copper lactate glycerine.

The prostate is frequently involved. Following an urethral irrigation the bladder is filled with the oxycyanide of mercury solution,

the prostate is massaged and the patient then allowed to empty the bladder. An instillation of copper lactate solution in glycerine may then be made.

In stubborn cases of chronic urethritis the injection twice daily of four or five cu. cent. of a five to ten per cent solution of peroxide of hydrogen and its retention for one to three hours has given favorable results when other forms of treatment have failed.

Of drugs used internally sandal wood oil stands at the head. Alcohol should be forbidden.

Dr. N. E. Aronstam presented a paper on "Spermatocystitis." **Abstract.**—This paper considers only the gonorrheal infection of the seminal vesicles. The frequency of such infections following urethritis is underestimated. The practice of examining the vesicles per rectum in every case of gonorrhea will show the condition in many cases otherwise unsuspected.

Symptoms, Acute.—Feeling of fullness in the perineum and rectum; defecation is painful, and painful emissions occur. There may be symptoms suggesting extension into the epididymis but without tenderness and swelling of this organ. Chills, backache and vomiting indicate a more intense infection. The examining finger detects a boggy edema at the base of the prostate and a bulging of the vesicles.

Chronic.—Subjective symptoms are almost nil. There is very little tenderness. A persistent urethral discharge similar to that of chronic posterior urethritis. Rectal examination reveals an enlarged seminal vesicle about the size of a bean. The ungloved finger should be employed in making the examination.

Treatment of Acute Form.—Urinary antiseptics, especially the balsamics, cold to the perineum, continuous current of warm saline per rectum. Rectal suppositories of opium and belladonna if urinary tenesmus is marked. No cathartics should be given. Rest in bed is essential and sometimes sufficient alone.

Of Chronic Form.—The outlook is gloomy and the treatment unsatisfactory. The most rational measure to employ in the usual case is the insertion of large sounds medicated with an ointment of silver nitrate and balsam peru, or of ichthyol and adrenalin. These should be used three times per week and kept in place

for ten or fifteen minutes. Vasectomy and drainage of the prostate have been done in very obstinate cases and with some success. Rectal irrigation with hot saline is a valuable adjunct. Vesicle massage may be of value but should be discontinued if no abatement of the urethral discharge occurs in three weeks.

CLARENCE E. SIMPSON,
Secretary.

DOES THE MEDICAL SOCIETY PAY?

C. S. Cope, M. D.

Secretary of the Ionia County Medical Society.

This question is frequently put to those who are actively interested in promoting such societies, and this question put in the way it is, serves often as a stumbling block in the path of those to whom such societies are or would be of the most benefit. The propounder of this question always has his answer ready—which is, “No, they do not.”

It is to clear up a few doubts and to set forth a few facts that I ask for your space to tell what I have learned along this line. When the Ionia County Medical Society was organized six years ago, but few could be induced to attend and a fewer number to join, but with the few faithful and devoted men who met with us from the first we held our meetings, read our papers, had our social times and banquets and went home rested, refreshed and instructed. As time wore on some became luke-warm, some moved away and some dropped out, but a remnant remained who kept alive the holy fire.

By concerted action we began inducing others to come, each member striving to be present at every meeting, and by and by more came with us. This last year has seen a wonderful ingathering, so that now nearly every eligible doctor in the county is a member.

What has been accomplished? The old caste or barrier of school or pathy has been effectually carried away. We now know each other as physicians, each man using those means and methods best known to him in the treatment of disease, with none to criticize or comment on his way of healing the sick.

We have established a new fee bill in which every one in the county, be he a member of the society or not, is benefited. The rates for

county work heretofore has been too low—25 cents a mile one way was the prevailing price. The rate now established is \$1.00 for the visit and 50 cents a mile one way, measured from the doctor's office. In some outlying country places the charge will for a time remain at 25 cents, but in time this will all be brought up to 50 cents. When a physician attends a case for a long time and the patient finally passes away, or in case the bill has to come before an administrator for settlement, the charge for mileage can be made at 50 cents, and collected, too, for that is the fee established by the county society. In a large part of the county 50 cents is the prevailing price. It is only in the outskirts, or when the cheaper rates of contiguous territory appear, that a lower rate prevails. If every county would put its price to this mark—and every physician demand it—there would be no trouble in collecting it, for surely there is no profit to the doctors at a 25-cent mileage, and to no class of people has prosperity come as it has to the farmers.

Another important thing we have done is the securing of a hearing before the County Board of Supervisors. It has long been a source of severe trial to physicians who have had to treat cases of contagious diseases among the indigent to have to wait six months for a hearing and then to have their bills for service cut one-third to one-half without recourse.

The Ionia County Medical Society took up this subject in a businesslike way. We began by agitation among ourselves, frequent meetings were called, and special meetings, and suppers, and smokers, and banquets. Much personal work was done among the doctors, till finally they all got together and framed a fee bill and made some declarations, and we called in expert legal advice. Of this I will speak later. The introduction of our new fee bill got us fairly before the public, and the papers gave it to us hot and heavy, but we kept on our way. The fact that we were thinking of attacking so august a body as the Board of Supervisors (an unheard of thing) got into the papers also, and to our surprise the supervisors notified us that they had appointed a committee to confer with a committee from our society as to some things that might come up in the future, but no offer of concession was made for the present. There were then pending many bills for smallpox at

\$5.00 a visit, which had been cut to \$3.00. Some of the doctors had collected what was allowed, but some said they would have a mandamus proceeding instituted rather than take a lessened fee. A committee from our society went before the Supervisors and, although the doctors are usually quiet fellows, they surprised themselves and the Supervisors by the speechmaking.

The session lasted over three hours, with someone talking all the time. It was pointed out clearly to the Supervisors that we knew that they were purely politicians, and it was not for the benefit of the county or for any consideration they had for the poor of the county that they cut the doctors' bills, but merely that they might be able to return to their constituency and say: "See here what a lot in taxes we have saved you by keeping these doctors from robbing you." Now, we said we will call a spade a spade and so will clearly understand each other. The twentieth century is full of surprises, and of none more so than for the politician. Heretofore you have treated with the doctor individually and have had your own way. Now you must treat with him collectively, and as such you encounter an unknown force and influence you have never dreamed of, and if reasonable consideration is not shown to the bills now before you some of you may be retired to private life after the next election. They at once went up in the air and tried the mighty bluff, but when they were told that every doctor in the city of Ionia and nearly every one in the county were members of the county society, and those not members were in hearty accord with our movements; that in addition to a solid county organization we had district and state and national affiliations all inter-related, all depending on the county as a unit, and all moving in unison, they began to calm down.

We then stated that the doctor, like charity, "had suffered long and had been kind," but that now he was ready to ask for what was his by right. The statement was made that it was a doctor and not Roosevelt who commanded the "Rough Riders." That this doctor cleaned up Santiago, the filthiest place on the western continent, and made of it a health resort. That he did the same for Havana, and that after many great generals had gone to the Philippines and returned without accomplishing anything. That this selfsame doctor was

sent there and that his control brought order out of chaos, and that he had been advanced over the heads of many army men and made a major-general. By this time they were taking long breaths, and were electrified when one member of the committee stated, as he had before the Medical Society, "I name to you a future President of the United States, the man who more nearly would fill Roosevelt's place than any candidate in the field. I name you you Dr. Leonard Wood, Major-General, U. S. A.—the man who does things."

They were reminded that recently an admiral of the navy had resigned because a doctor had received an appointment to command a ship. That the President had commended the doctor's appointment and had reprimanded the admiral, for the admiral was only a stickler for red tape, while the doctor's appointment was for the good of the service.

In conclusion it was averred that the Medical Society as it now stands, a wheel within a wheel—National, State and County—is a powerful political organization as regards things medical, and that the doctor is in politics to stay. That without the doctor and the fruits of his works commerce could not proceed, and that the doctor and what he had done and is doing to prevent sickness and preserve health in sanitation and hygiene and therapeutics constituted one of the most valuable assets of Uncle Sam.

Now as to results:

That Board acceded to all our demands. They went back to those accounts that had been cut, and paid as cut, and paid these, as well as all the rest, in full. A precedent has been established and in future \$5.00 will be the amount paid for smallpox visits.

The foregoing is an apt illustration of a statement made in his Berlin lectures, 1906, on "Industrial America," by Professor Laughlin, viz.: "When the public, comparatively untrained but forceful and energetic, moves under some common impulse, the effect is overwhelming. Force is the permanent characteristic of the American people, and with this goes an abiding optimism and belief that the ideal thing will soon come to its own."

The legal opinion spoken of earlier is, that under the law as it now stands, the Supervisors have the right to cut any bill down to what they may consider a reasonable price. This is

just when properly exercised, as it is calculated to prevent wrong.

The proper steps for physicians now to take is to first make a written contract signed by the township board and the physician. In this a stated sum per visit is agreed upon and the township, and not the county, must pay. This takes it out of the hands, or rather prevents its falling into the hands of the County Board of Supervisors.

Now this thought presents itself: Why should not the State Medical Journal office prepare and print proper blanks for physicians to use in such cases and furnish such to the secretaries of county societies, who for a reasonable sum could furnish them to such physicians as would need them. This would furnish the doctor with a proper blank to present to the township, village or city board, so that he could draw his pay from the start and not be hindered by red-tape delays.

In closing, let me tell a story that may help you in giving an answer to the question forming the caption to this paper. When I was a lad of twelve and wore copper-toed boots "and filled my father's house with racket," the great Civil War was in progress. Out of a family of eight boys, two were already in the field. The third to go was my brother John, just a little past seventeen.

He marched away with his regiment, the Ninety-eighth Ohio Volunteer Infantry. Given a musket and a suit of blue, he was sent to Kentucky to guard his home from a southern invasion. At the same time a regiment was marching from the Gulf states, and some other boy of like age, with a musket and a suit or gray, was sent to Kentucky to guard his southern home from a northern invasion. These met in the battle of Perryville, and there these two young fellows, both equally brave, both equally patriotic, stood up and fired their muskets at each other. They should have been playing football on some college campus or singing college songs. The battle waxed hot, the northern line was driven back, and Brother John fell and was reported in the column of the dead. How it fared with the boy in gray I do not know. History says that the first day of that fight was favorable to southern arms.

I well recall the day when the news came to us of this battle and its dire results, and what it held for us. We just all clung to each

other and with arms entwined about each other we sat down and cried. We could hardly make it seem real that John was dead—the genial, loving boy who had been with us only six weeks before. The days of grief were poignant and we could not be comforted. Finally grief gave way to resignation, and with tender hearts and tearless eyes we took up again the great burden of life. "We had passed from death into life." In the still evenings, when the atmospheric conditions were favorable for sounds to travel long distances, we could hear the boom of cannonading in the Virginia mountains, where our two older brothers were bivouaced.

Then one day a curious thing happened. Someone had been to the postoffice and brought home a soiled envelope directed in a strange handwriting and bearing the Louisville postmark. On opening the letter a soiled piece of paper was found on which was scrawled some almost unintelligible chirography. No name was signed, no date given. All we could make out was "wounded and in Louisville hospital." We looked at each other and said, "Can it be possible he is yet alive." Soon a trusted messenger was sent, and in a few days returned with our John, a wounded soldier, and this was the story he told:

"We were ordered to fall back, and as I was passing over a knoll I was shot in the ankle and fainted away. When consciousness returned I found that I was in the rear of the rebel army, they having passed me in their charge. I broke my gun, threw away my ammunition, tied up my leg with my handkerchief and put my foot up beside a fence. No sooner had I done this than a sharpshooter put a buckshot in my shinbone. I took down the leg. The rebels now came back with prisoners and wounded and I was carried to a tobacco warehouse and laid on the floor in a row with the other wounded men. Here I lay for several hours till the surgeon came. He passed several times among the men, and on coming to me stopped and seemed to be thinking deeply. He abruptly accosted me, asking 'Is your name Cope?' I replied, 'It is.' He said, 'I know your father. He and I were co-workers in the old Belmont County, Ohio, Medical Society, and many a fine address has he given us as our society itinerated from Barnesville to Bridgeport, and from St. Clairsville to Morristown. He is a grand man and

I respect him greatly. I knew you for an Ohio soldier from your belt, whose buckle bears the letters O. V. I. I have observed that in death or great shock the features bring out the family resemblances at their best. I moved to Kentucky some years ago, and when the war came went by preference with the South. My name is Bushrod Johnstone.' "

My brother's wounds were tenderly dressed. He was taken from the tobacco warehouse and placed in a church at Harrodsburgh that had been converted into a hospital, and as soon as his wounds permitted he was given a parole, money enough for his needs and sent through the lines, when he made his way to the hospital at Louisville.

What is your answer to the caption to this paper?

Correspondence.

New York City, February 10, 1908.

To the Medical Profession of Michigan:

The government and the people of the Republic of Guatemala, as well as the National Committee of the Fifth Pan-American Medical Congress, are actively endeavoring to do all in their power, in a sure and efficient way, to make this meeting a great success.

With this object in view the Committee will be pleased to invite you personally to attend, as well as the members of the society or medical fraternity to which you belong, in order that through your presence and works the certain success of the Congress, that science expects of its representatives, will be assured.

The Committee hopes that you and the other members of your institutions will meet at Guatemala on the 5th, 6th, 7th, 8th, 9th and 10th of August, 1908, and sincerely begs that from now on you will not hesitate to keep yourself in fraternal relations with this Committee, and also that you will let us know beforehand if you intend to attend the Congress in person or to send some scientific contribution.

The Committee hopes to receive a reply shortly to the invitation to this meeting, to stimulate the advance of medical science and to contribute to the preservation of the health

and the prolongation of the life of the people of the Americas.

We take advantage of this opportunity to express to you the best regards of

Yours very truly,

JUAN J. ARTEAGA, President.

JOSE AZURDIA, Secretary.

Apropos of the resolutions which were adopted at the last annual meeting regarding full surgical aid to the injured, the following correspondence with the state agent of the Travelers Insurance Company is of interest. From this correspondence it is evident that there is a business side as well as a professional aspect to the question.

The resolutions passed were:

"Dr. F. W. Robbins, Detroit, moved the adoption of the following resolutions:

"Whereas, Several accident and liability companies have in the past, and do now, write policies granting full surgical aid to the injured, and

"Whereas, Such aid is given by the surgeons without adequate compensation, and

"Whereas, In many ways, such contracts, as regards the surgeons, are non-professional, unjust and dangerous,

"Be it Resolved, That the Michigan State Medical Society earnestly protests against any such accident and liability contract being written in the State of Michigan whereby full surgical aid is assumed.

"Be it further Resolved, That a copy of these resolutions be forwarded to the secretary and chief medical officer of each accident and liability company doing business in Michigan.

Detroit, Mich., January 27, 1908.

Secretary of Michigan State Medical Society:

Dear Sir:—I beg to acknowledge receipt of the extra copies of resolutions requested.

I have been combatting this very thing as a matter of business for some four or five years, and with quite a degree of success. I am enclosing a copy of a little article I wrote up some time ago, which has been used considerably throughout the state. The fact of the matter is, that in a great many of these

Full Aid cases, doctors have created misdemeanors, which should not be tolerated, for I feel that any doctor, irrespective of the financial conditions, should render the very best services possible, even from a humane standpoint if for no other reason.

This little article may throw some light upon this matter.

Yours very truly,
E. S. RAYMOND,
State Manager.

"Full Aid" a Failure.

The fact is that its tendency has been to increase the number of damage suits.

This disposition to do too much has led the employes to think "Why so good," and wonder if the motive is not to appease a disposition he may have to bring a "claim" or a "suit." He seeks the attorney, frequently the shyster lawyer; the latter's depredations are too sadly known.

Again, such service will only be rendered by the usually otherwise "unsuccessful" doctor. Good surgeons will not work for the small consideration paid by liability companies giving "full aid." Liability companies have frequently sought to enlarge their premium income at the expense of the medical profession, and are rendering such aid as would not be acceptable in the average family—of course, there are exceptions, but they are few.

The service is inferior. Usually the policyholder must confine his calls to the one doctor. The outcome is patent. He cannot be found—another doctor is called—who pays the bill? The instances are many where the insuring company has refused.

The injured, no matter who he is, is entitled to the best. Liability companies cannot give that. Doctors' bills are not a subject of insurance on so large a plan. Conditions are too varying. Satisfactory first aid service can be rendered, but even this is unadvisable—perhaps necessary. However, such service frequently increases the cost of specific classifications and necessitates re-ratings. Many plants have essentially prohibitive rates. "Some one must pay the piper."

In many cases, and quite universally, full aid service (poor, and by surgeons so-called) has been rendered for less actual cost to the insur-

ance company than good, first-class first aid would have cost.

Manufacturers must awaken to facts,—the sun is rising, or perhaps they, as a party to the transaction, will be defending real malpractice suits. We are not an alarmist, for years of experience have contributed to these conclusions. Every effect has a contributory cause. Now let the cause, the many causes, be corrected, and manufacturers will see the average rate reduced and otherwise more liberal contracts.

The change must come. Poor and unworthy the company, or the agent, who invites the assured to do just those things which are against his better interests, but most of all against the interests of the business world.

The injured employe, because he gets something for nothing, submits to the torture of "full aid" and his condition is much worse than it would be, made so by doctors who cannot do the case justice, and sometimes, would not if they could, because so poorly paid. Office calls are demanded, when the poor sufferer can hardly "hobble," because the poorly paid doctor will not make the house call,—it takes too much time.

There is a large army of men and women with mangled arms, poorly amputated, deformed arms and legs, because fractures have not been properly reduced; blind, and made so by poor treatment, etc., etc.

Cannot we urge more humanity and discourage commercialism in this barter?

If the manufacturer will render full aid, let him give the best, and pay the bill, but not serve the end of some avaricious insurance company, which needs to make this "competition feature" a method to secure an increased premium income, and give what they do give as cheaply as possible, and not alone cheaply, but usually cheap.

Will not our Medical Societies denounce such wholesale practices, for certainly they are interested to have all work done, well done.

The manufacturer may say he is satisfied, but are the results to the injured man what they should be?

SMITHSONIAN INSTITUTION.

Hodgkins Fund Prize.

In October, 1891, Thomas George Hodgkins, Esquire, of Setauket, New York, made a dona-

tion to the Smithsonian Institution, the income from a part of which was to be devoted to "the increase and diffusion of more exact knowledge in regard to the nature and properties of atmospheric air in connection with the welfare of man."

In the furtherance of the donor's wishes, the Smithsonian Institution has from time to time offered prizes, awarded medals, made grants for investigations, and issued publications.

In connection with the approaching International Congress on Tuberculosis, which will be held in Washington, September 21, to October 12, 1908, a prize of \$1,500 is offered for the best treatise that may be submitted to that Congress "On the Relation of Atmospheric Air to Tuberculosis."

The treatise may be written in English, French, German, Spanish or Italian. They will be examined and the prize awarded by a committee appointed by the Secretary of the Smithsonian Institution in conjunction with the officers of the International Congress on Tuberculosis.

The right is reserved to award no prize if in the judgment of the committee no contribution is offered of sufficient merit to warrant such action.

The Smithsonian Institution reserves the right to publish the treatise to which the prize is awarded.

Further information, if desired by persons intending to become competitors, will be furnished on application.

CHARLES D. WALCOTT,
Secretary, Smithsonian Institution.

Washington, February 3, 1908.

News

Dr. George P. Lowrie and Dr. George P. Cooley, of Detroit, have been appointed assistant surgeons for the Michigan Central Railroad.

Smallpox has been reported in Jackson, Burr Oak, Calhoun county, Monroe Center, and in lumber camps near Cadillac.

Scarlet fever is epidemic at Kingsley and Shepherd.

At the June meeting of the American Medical Association in Chicago special entertainment is to be afforded visiting women physicians by the Women's Alumnae Committee, the Women's Medical Society of Illinois, and the Women's Medical Club of Chicago. There will be a banquet and entertainment on the evening of June 2.

The Cook Sanatorium at Belding, owned and conducted by Dr. A. B. Spinney, was destroyed by fire on February 7.

Dr. William P. Lane has resigned from the position of medico-legal expert of the council committee on claims and accounts in the city of Detroit, and will be succeeded by Dr. Frank T. Lodge.

Dr. McConnell, of Ludington, has presented to the local Carnegie library 66 volumes of medical works.

The Detroit Board of Health has submitted a request to the city for an appropriation to pay four nurses to look after school children. These nurses would supplement the work of the school medical inspectors, who can do nothing more than detect sickness in pupils and send them home. If the parents cannot properly care for such children, a nurse will be sent to give proper directions and assist in any way possible.

Dr. A. Lenhard, of 1147 East Grand Boulevard, Detroit, suffered the loss of his barn by fire on February 4.

Dr. F. T. Carlton, of Albion, has been elected secretary of the National Child Labor Committee to succeed Attorney L. W. Goodenough of Detroit.

A Hospital School for Crippled Children has been started in Detroit.

Dr. and Mrs. C. B. Burr, of Flint, have left for a trip to Europe. During Dr. Burr's absence, Oak Grove will be in charge of Dr. H. E. Clarke, assistant medical director. Dr. Clarke will see prospective hospital patients in consultation with and at the request of physicians. Telephone Main 1418, Detroit.

Dr. A. B. Simonson, chief surgeon of the Calumet & Hecla staff of physicians, spent a part of February with his family in Florida.

Dr. C. H. Rodi, of the Tamarack staff, is spending a vacation of four weeks in Arizona and Mexico.

Dr. J. S. Hamilton, formerly interne in Harper Hospital, who for the past year and a half has been assistant to Dr. W. K. West, of Painsdale, leaves the services of the Copper Range Consolidated March 1st to engage in private practice in Detroit. For six months he will assume the practice of Dr. H. Wellington Yates, who will spend the time abroad. He will be succeeded by Dr. L. W. Childs, of Baltic, and Dr. Arthur Jones, now interne at the hospital, will succeed Dr. Childs as assistant at Baltic.

Dr. E. T. Abrams, of Dollar Bay, has been appointed as one of the Upper Peninsula members of the newly formed Michigan Anti-Tuberculosis Committee.

The house staff of Harper Hospital, Detroit, has organized a little society for scientific study.

Dr. W. J. Merdian, of Detroit, has returned from a trip to Europe.

Dr. G. E. Henson, formerly of St. Clair, has removed to Florida.

Dr. W. E. Wilson, of Grand Ledge, is the new president of the State Board of Pardons.

The Detroit Clinical Laboratory made 3,000 examinations during 1907.

Marriages

Albert Harvey Miller, M. D., Gladstone, to Miss Gertrude Adams, Sault Ste. Marie, December 31.

Addison B. Clifford, assistant surgeon U. S. N., Ypsilanti, to Miss Grace Kathleen Emons, Detroit, January 1.

George Raymond Pray, M. D., to Miss Zoe King Porter, both of Jackson, February 1.

C. S. Wilson, M. D., to Miss Grace W. Smith, both of Detroit, January 18.

Deaths

Oliver Cromwell Comstock, M. D., formerly of Marshall, died at Brookline, Mass., August 10, 1907, aged 88.

Frank L. Leckner, M. D., a member of the Michigan State and Wayne County Medical Societies, died at his home in Detroit January 30, after an illness of sixteen months, aged 49.

Henry Going, M. D., M. R. C. S., for many years a practitioner of London, Ont., but recently of Detroit, died January 27, at his old home in London, aged 92.

C. H. Morse, M. D., a graduate from Harvard in 1868, died at his home in Marquette on February 3.

Resolutions Passed by the Eaton County Society on the Death of Dr. William Parmenter.

WHEREAS, Death has removed Doctor William Parmenter from membership of the Eaton County Medical Society, and

WHEREAS, We, the members of the Society, recognizing him as our personal friend, and one of our older and most valued counselors and advisors, and one who came into the activities of our beloved profession in the earlier days of its history, and endured so many of the hardships and deprivations incident to the practice of medicine in the early days. Therefore, be it

RESOLVED, By this Society: That we recognize his sterling worth as an able and learned physician, and a true Christian Gentleman, and one, who by his example and fidelity, did so much to the cause of his fellow men that we desire to have his example perpetuated by having these resolutions recorded in our journal. And be it further

RESOLVED, That a copy be sent his family, and to the Journal of the Michigan Medical Society, of which the deceased was an honored member.

C. B. ALLEN.
A. W. ADAMS.
E. C. PALMER.

Persistent bleeding or irregular prolonged menstruation is very suggestive of uterine fibroids.

Persistent hemorrhage after the extraction of a tooth is often relieved by the application of trichloroacetic acid. If the hemorrhage does not cease after its application, tamponade of the cavity is the next best available means of stopping the flow of blood.—*Am. Jour. of Surg.*

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

The New Tuberculin Tests.—A good deal of literature has appeared recently regarding the relative and absolute value of Pirquet's skin reaction to tuberculin and the eye reaction of Wolf-Eisner and Calmette. Both tests are made with more or less dilute solutions of old tuberculin, which in Pirquet's test is applied to a small superficial skin incision, while in the Calmette test it is dropped into the eye. The reaction in the one consists in the appearance of a small papule at the site of inoculation after a period of from a few hours to several days; in the other in a conjunctivitis of greater or less severity. Recent reports show great divergence in results obtained.

HUTCHINGS (*Therapeutic Gazette*, Dec. 15, '07) describes the eye test, reviews the literature and reports 20 cases. He worked with 1% solutions made from a tuberculin purified by himself from Parke, Davis & Co.'s material and from dried material prepared by Parke, Davis & Co., for experimental use; also with Calmette's solution, which he thinks produces an unnecessarily severe reaction. He obtained a reaction in one case of latent tuberculosis of the lungs, and failed to obtain it in a case of tuberculosis of the left kidney, active last summer, a case of healed tuberculosis of the kidneys, and two cases suspected of being tuberculous peritonitis. No case not known to be tuberculous reacted.

FREER (*Münch. med. Wochenschr.*, Jan. 7, '08) reports results from 344 children tested by Pirquet's method, and 50 by Calmette's. He believes Pirquet's test to be more certain, easier to observe, and less unpleasant to patient. The diagnostic value he considers about the same as that of the subcutaneous injection of tuberculin, without the unpleasant and sometimes dangerous constitutional and focal reaction. Negative results do not exclude tuberculosis, as cachectic patients and cases of miliary tuberculosis or tubercular meningitis in late stages often do not react. Several cases did not react to a 1% solution (made with 2% boric acid) in the eye, which did react to a 25% solution on the skin. A ½% solution often gives a doubtful reaction, while 1½% in the child's eye frequently causes an alarmingly severe inflammation. He was unable to confirm in children the occurrence of reaction in a healthy individual on a second test eight days after the first, as has been observed by others in adults.

MAININI (*Münch. med. Wochenschr.*, Dec. 24, '07) reports 208 cases tested by Pirquet's method with a 1:80 dilution of tuberculin, and 100 cases by Calmette's method of 5% tuberculin. The most striking thing about his statistics is that out of 111 adults in whom there was no cause for suspicion 89 gave the skin reaction while of 56 similar cases subjected to both tests 50 gave the skin reaction and only 8 the eye reaction. He concludes that all tuberculous individuals except the very advanced cases give both reactions; that the reactions are probably, but not certainly, specific, and that the skin reaction often occurs in latent or healed cases, while the eye reaction seldom does.

WIENS AND GUNTHER (*Ibid*) report from the Breslau clinic results obtained with ½% and 1% solutions prepared according to Calmette's method, and conclude that the 1% solution prepared in this way is likely to cause dangerous inflammation of the eye, while the ½% solution gives doubtful results.

KLIENEBERGER (*Ibid*) in the Königsberg clinic, made the eye test with 1% solution (Calmette's). Out of 46 clinically non-tuberculous patients 8 reacted to the first instillation, and 36 to the second. The severity of the reaction on the second instillation was noteworthy. He does not agree with others that reaction to a second test indicates latent or healed tuberculosis, but regards it as a "hypersensitiveness reaction."

SMITHIES AND WALKER (*Journal A. M. A.*, Vol. 50, P. 259) report exhaustively on 242 persons tested at the University of Michigan by Calmette's method with a 1% solution prepared from Parke, Davis & Co.'s tuberculin. They discuss theoretical considerations with some detail. 198 of the 242 persons did not react, 39 gave positive reaction, 5 were doubtful. All the cases of active tuberculosis reacted, and 10 which were not clinically tuberculous, of whom 3 gave histories of old tubercular process. Six persons supposed to have been at one time tuberculous did not react.

They conclude that the reaction is of distinct diagnostic value, but does not always indicate an active process, and should be supplemented by careful physical examination.

Their statement that the tuberculin used by them was "essentially tubercle bacilli, or fragments of such," is rather surprising.

SURGERY

Conducted by

MAX BALLIN, M. D.

A Conservative Treatment of Sarcoma:—

Sarcomas fall into two clinical classes: those relatively benign, comprising the majority of the central sarcomas of long bones, the myelomas, giant-celled sarcomas, and certain fibro-sarcomas, which may be eradicated by simple resection, enucleation, or, at times, even by curettement, and those very malignant, including the periosteal sarcomas of long bones, the melanotic, small round-celled and neuro-sarcomas, which almost invariably lead to death within a few years after their appearance, despite the most thorough excision, resection, or amputation known to surgery. Early and more radical operative measures of great value in combatting carcinoma have increased the early mortality and have not clearly decreased the tendency to recurrence and metastasis in sarcoma. High amputation, usually unnecessary, and unjustifiable for the more benign sarcomas, usually is unavailing against the more malignant. Thus, of 68 cases of amputation for periosteal sarcoma of the femur collected by Butlin, only one patient was known to be alive three years from the time of operation, and in this case there was doubt as to the periosteal origin of the tumor. Of the very malignant tumors, sarcomas are most prone to spontaneous disappearance, or to retrogression after X-Ray treatment, the injections of certain toxins, or after pyogenic infections; on the other hand they are least amenable to radical operative treatment. Traumatism is the most powerful localizing agent for the primary growth in sarcoma; operative traumatism the most powerful localizing agent for the recurrent growth; in other words, excise, resect, amputate where you will the return of the sarcoma usually will be in the scar. Operative traumatism should, as far as possible, be limited to the field of the sarcoma, so that the recurrence may not be invited to a new or distant point. The life and growth of the primary sarcoma rarely directly cause cachexia or a fatal issue, the death and decomposition of the tumor-cells are the most potent factors in the

production of cachexia and a frequent cause of death of the patient. The duration of life, therefore, is often measured by one's ability to combat necrotic processes in the tumor. Pending the development of better therapeutic agents, the combination of (a) judicious subcapsular enucleation, (b) massive and prolonged Roentgenism, (c) the topical employment of methylene blue or pyoktanin, and (d) occasionally the internal administration of certain drugs and toxins are commended as offering results in the treatment of the very malignant or recurrent types of sarcoma superior to those obtained by the most extensive and desperate surgical eradication.—W. WAYNE BABCOCK, M. D. AND G. E. FFAHLER, M. D., *Surgery, Genecology and Obstetrics*, Feb., 1908.

The Value of the Differential Leucocyte Count in Acute Appendicitis.—Blood examination in cases of acute appendicitis is of great value in determining the severity of the condition and therefore deciding whether or not immediate operative interference is indicated. The degree of leucocytosis, formerly considered an important diagnostic aid, is too variable to be of any practical value. The relative disproportion between the percentage of the polynuclears and the degree of leucocytosis is reliable in the majority of cases, but the number of exceptions is so great that its practical value in determining immediate operation becomes very small. The estimation of the percentage of polynuclears alone is more reliable than either of the preceding methods, and therefore, together with the fact that it is the one most easily made, the method to be recommended. A polynuclear percentage of 90 per cent or more, indicates a severe process that needs immediate operative interference; a percentage below 76 per cent means a "safe" or mild process; a percentage between the two extremes speaks for the one condition or the other according as it approaches the one extreme or the other.—ALFRED H. NOEHREN, *Annals of Surgery*, Feb., 1908.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

The Medical Treatment of Nephrolithiasis Urica.—The treatment of this disease concerns itself first with prophylactic measures. This means the prevention of uric acid and urate deposits by increasing the solubility of the urinary uric acid to a maximum, and reducing the urinary excretion of uric acid to a minimum by proper dietetic regulations. At the same time the reaction of the urine should never be allowed to remain too strongly acid.

CROFTAN gives a very rational *resumé* of the subject of uric acid excretion. He does not enter into the details that have led to so much discussion in the literature during the past few years, but treats the subject of the formation and the treatment of uric acid calculi from a purely medical standpoint.

Uric acid is derived from the nucleins of the food and from the nucleins of the body. The former can be controlled, whereas the latter cannot. The author takes up the effects of the different food stuffs first of all. He believes that the moderate ingestion of meat is not only permissible, but necessary. The administration of nucleins or extractives should be reduced. This interdicts all the internal organs (liver, spleen, kidneys, etc.), as well as the extracts, broths and gravies. Raw, smoked and cured meats are also bad. To exclude poultry is preposterous. The best way to prepare meats of any kind is to boil. Eggs may be permitted in moderation. Milk in addition to mixed diet is well borne, but the exclusive administration of milk is bad on account of the large quantities of water that must needs be taken. Although it has been argued that fats should be omitted from any such dietary, their addition is indispensable, for they make up the total number of calories that are necessary to maintain a full nutrition when the patient is taking a full amount of physical exercise. Carbohydrates exercise no bad effects upon the uric acid excretion, and if not taken to excess causing gastro-intestinal disorders are well borne. With the exception of celery and onions, vegetables and fruits of all kinds may be allowed.

Much has been said on the subject of the different kind of fluids that are permissible. Water should be the chief beverage. Though plenty of water may be taken, its excessive use is as detrimental as its reduction. One to one and a half liters per day is about the proper amount. Mineral waters as a class do not possess any virtue.

Those that have an abundant quantity of calcium are the most desirable. Tea and coffee are considered bad. They contain some of the bases from which uric acid is derived and hence are likely to increase its excretion. All alcoholic beverages are to be avoided.

In order to decrease the acidity of the urine the administration of sodium bicarbonate or the giving of calcium salts brings about the desired results. The former increases the sodium in the blood while the latter diminishes the phosphoric acid. The latter method is the better procedure and is accomplished by the use of fifteen to twenty grains of calcium carbonate three times daily. The danger of the sodium salts are that they are likely to cause phosphatic calculi, to say nothing of the effect on the digestive tract and on the blood corpuscles.

CROFTAN roundly scores the so-called uric acid solvents. The urinary antiseptics are of value only in preventing infectious organisms from forming a nidus for stones. Urotropin alone has some claim to a solvent in nephrolithiasis, as in splitting off formaldehyde in the body it permits the latter to combine with the uric acid and form soluble compounds. Its dose is from five to ten grains taken three times daily in a full glass of water.

For the symptoms of pain some of the local applications are first to be tried. For dull heavy pain, heat is the most grateful. Cold is to be applied in severe renal colic that comes in paroxysms. Often stupes of belladonna or turpentine are useful when applied to the lumbar region. If none of these relieve then opium in large doses, either as morphine, or as the tincture or powder, in starch enema or in a suppository, should be employed. At times a hot bath, an enema containing chloral up to twenty grains, or a few whiffs of chloroform will produce relaxation of the muscular spasms and facilitate the passage of the stone.

For renal hemorrhages, when slight, rest in bed and a purge is sufficient. If persistent the fluid extract of ergot is recommended by Croftan to be administered in doses of fifteen to thirty drops by hypo. The author has also used tannin, ten to thirty grains in powder; the fluid extract of hydrastis, fifteen to sixty minims, and the hydrochlorate of hydrastinin, one-half to two grains, with much benefit.—*Illinois Medical Journal*, January, 1908.

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

The "Ophthalmo-diagnostic" of Typhoid Fever.—A. CHANTEMESSE describes the preparation and use of a diagnostic material from typhoid bacilli in the form of a dry stable powder, or a sediment whose stability is not yet proved. In more than 200 application to the eye it has never produced the slightest harm. The substance can be used only in an entirely healthy eye; the other eye is used for comparison. The extent of the reaction depends upon the sensitiveness of the individual mucous membrane and the quantity of the substance introduced. The dose tested by the author causes no reaction in healthy individuals, nor in those afflicted with other diseases, but in typhoid patients it causes after several hours a redness, lachrymation, and delicate fibrinous exudate. The reaction may still be seen after 48 hours.

In 70 typhoid cases the substance never failed; frequently the serum diagnosis was not obtained till several days later. In 50 non-typhoid cases neither the ocular-diagnostician nor the serum reaction was positive. One tuberculous patient showed transient redness of the eye, but she had probably suffered from typhoid two years previously.—*Deutsche med. Wochenschr.*, 1907. S. 1572.

The Results of Modern Typhoid Research and its Significance in Medical Practice.—DASKE describes the immunization of man against typhoid and concludes that it is to be regarded as a scientific, well warranted procedure. Not every organism, to be sure, is qualified to form antibodies, on inoculation. In this way are explained the recurrences and renewed infections occurring sometimes after typhoid. Moreover if an organism possesses adequate protective material, many strains of typhoid are hardly influenced at all by a bacteriolytic serum. The protection by vaccination appears to depend on the intensity and number of reactions, and in general to last only for a year. The present customary procedure is not sufficiently safe and simple.—*Zeitschr. f. ärztl. Fortbildung*, 1907. No. 16.

Arteriosclerosis in the Young.—FREMONT-SMITH assembles many reports and opinions concerning arteriosclerotic conditions in the young. The increased proportion of thorough necropsies shows a more frequent occurrence of arterial change than was formerly supposed to exist. In infants rarely present evidences, but children over

two years show signs in constantly increasing ratio with their age. Heredity, congenital syphilis, and infectious diseases are the chief causes. These conditions have produced characteristic vascular changes in very young infants, and even in the fetus, and acute infectious diseases affecting the mother have been reported as producing vascular degeneration in the fetus. Particular attention has been given recently to the role played by infectious diseases in causing arteriosclerosis in the young, and especially in typhoid fever. The work of Wiesel on this subject is reviewed; he made complete studies in 300 autopsy cases, 80 of which showed vessel changes, 20 due to diphtheria, 20 to scarlatina, and 40 to other infections, such as measles, pneumonia, influenza, sepsis, osteomyelitis, otitis, typhoid, and meningitis. In many cases the evidences of degeneration were macroscopic, minute yellowish patches in the aorta, carotids, and coronaries, and occasionally calcareous deposits. Microscopically the findings were quite constant, including serous infiltration of the media, diastasis of muscle fibers, vacuoles between the fibers, displacement of elastic fibers and subsequent rupture, with necrosis of the musculature. The intima was not usually involved. The changes are most marked in the peripheral arteries. Wiesel is uncertain as to the ultimate outcome of the changes produced by these acute processes, but believes that regenerative changes take place. What influence these degenerative phenomena may have on the advent of sclerosis in later life, it is impossible at present to state, but it is reasonable to presume that vessels once weakened are less capable of resisting undue strains that they may be subjected to in after years.—*Amer. Journ. of Med. Sc.*, Feb., 1908.

Experimental Study of the Functions of the Parathyroid Bodies.—PFEIFFER and MAYER devotes 63 pages to the detailed report of long series of experiments on dogs and mice, which confirm the assumption that postoperative tetany is the result exclusively of the loss of parathyroid functioning. They do not believe that the hyper-toxicity of the urine is due to any special tetany toxin, but think that it is merely the symptomatic expression of the increased metabolism during the attacks. Other findings supply an experimental basis for the clinical findings of Escherich in respect to the constant morbid changes in the parathyroid bodies in children who exhibit a tendency to tetany.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Pseudo-Myasthenia of Toxic Origin.—SIR WILLIAM P. GOWERS reports an unusual result of the toxic influence of petrol-fumes. The patient, a major in the army, at 38, had, at first, a peculiar perversion of taste, so that all sweet things had a salty taste. This soon passed away, but swallowing caused a tight feeling of the throat and finally he could only swallow jellies, soups, etc., being unable to chew solid food, although the masseters contracted fairly well. Palate movements seemed normal and there was no regurgitation. When he began to speak his voice seemed normal but on continued use it became feeble and articulation impaired. The palpebral orbiculars were weak, the angles of the mouth moved but feebly. Sensation and electrical reactions were normal. The optic discs were clear, and all reflexes were normal. There had been some attacks of pain in the chest, a sensation of a painful strain across the level of the lower part of the sternum, passing down to the umbilicus and extending up to the throat.

He had been superintending the testing of petrol engines in a closed shed and continually exposed to fumes of petrol, doubtless imperfectly burned. Strychnine hypodermically brought prompt improvement. A year later he was seen again with similar symptoms following a like exposure to petrol fumes. He was ordered to permanently relinquish his work and resume his strychnine, and he was not again seen.—*Rev. of Neur. and Psych.*; January, 1908.

Fundamental Principles in the Treatment of Functional Nervous Diseases with Especial Reference to Psycho-therapy.—Though his statement, he says, may be viewed with suspicion, COLLINS affirms that a correct diagnosis is by no means necessary to the successful treatment of many neuroses and cites in support the work of the charlatans, osteopaths, christian scientists. All of which goes to show the easily calculated influences of mind over body and how many are using this influence meretriciously outside the profession, as also the discredit to which our neglect of so important an influence inevitably tends. Even in the organic diseases, moral treatment is highly effective, for medicine by itself is so often worthless.

Much work with neuropaths forces the lesson home that it is the plan of treatment embracing many measures and seeking to overcome want of self-reliance, that is really most efficient for the good of our patients. DR. COLLINS is opposed to the idea that special skill is necessary and believes the general practitioner should study psycho-therapy just as he studies the management of typhoid. The patient must first be convinced that his disorder is understood. One of the things that much impresses nervous patients

is the realization that the physician knows without being told what his symptoms are. To this both experience and intuition may contribute. It is well known that the neurasthenics and psychasthenics often have great difficulty in formulating a bill of particulars and in such cases the psycho-analytic method is of great importance. To deliver the neurasthenic or psychasthenic from the painful reminiscences which seem to possess a "traumatic" value and act as the stimulus of an irritation on the nervous system is the important thing and to this end psycho-analysis is all important, though often a long and difficult task.

Neurasthenia is a sign of the times and flourishes in strenuousness, but psychasthenia has its origin in a neuropathic constitution which is inherited. Its chief mental symptoms are obsessions which take autocratic possession and are inimical to ordinary habits of thought. The patient himself realizes this, discusses it, and reasons about it, but feels himself powerless to prevent. Some form of tic is the most striking mental feature, either simple or associated, and these are accompanied by that more common distinguishing feature, an absolute lack of self-reliance. The psychasthenic is irresolute, self-deprecatory, and timorous.

As to treatment, both the patient must be treated, and the chief factor of the disorder, viz., heredity. The neurasthenia is more easily cured but for the psychasthenic a more searching psycho-therapy is needful. Doubt must be eradicated, fear conquered, despair dispelled, and a spirit of self-reliance engendered. In order to do this, one must have it in himself. The suggestion that emanates from environment, isolation, verbal assurance, from proper emphasis on evidences of recovery, is here most important and of far-reaching value. To this end the study of Plato and Emerson, upon which the patient is to concentrate his attention, has been of help. When such concentration is possible, recovery is not far away, for morbid thoughts are shut out. Gradually a re-education of will-power, an intensification of intelligence and an expansion of sentiment are brought about and the patient's resources are increased. Many patients are thus restored to lives of usefulness.

A great trial is that class neither neurasthenic nor psychasthenic who are perpetual doubters, finding it difficult to realize that the Lord and the law are satisfied with one's best and that what is one's best yesterday is not one's best today. These are neuropaths or deviates. Bad inheritance and bad bringing up have conditioned their state. Paternal and pedagogical co-operation would lessen misery and diminish the number of neurasthenics and psychasthenics.—*The American Journal of the Medical Sciences* for February, '08.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

Blindness from Cerebral Thrombosis Following Phlegmonous Tonsilitis.—In a male, aged 20, an acute intense exophthalmos of the right eye with swelling of lids and chemosis developed, accompanied by headache, chills, vomiting and intermittent fever, together with acute phlegmon of the right tonsil, which recurred several times. Almost simultaneous blindness and immobility of the pupil of the right eye set in, soon followed by the same symptoms in the left eye, but without exophthalmos. Two days after the occurrence of exophthalmos the right internal jugular vein was felt as a hard cord. A relapse of tonsilitis occurred on the thirty-sixth day of the disease accompanied by affection of the lungs. Under mercurial inunctions the patient recovered within two and a half months, with atrophy of both optic nerves, total blindness of the right eye and the preservation of a sector in the upper nasal quadrant of the left eye. The diagnosis was thrombosis of the orbital veins with or without thrombosis of the cavernous sinus.

The explanation of the infection was as follows: "The venous blood of the tonsil flows through the palatine vein into the internal jugular, above the entrance of the external jugular, communicating with the cavernous sinus indirectly through the superior petrosal sinus and transverse sinus, directly through the inferior petrosal sinus which anastomoses with the bulb of the vein. Apparently a thrombo-phlebitis of the palatine vein, caused by the purulent tonsilitis, was propagated to the cavernous sinus and the ophthalmic veins, creating the right exophthalmos.

Through the circular sinus of Ridley the left cavernous sinus and the intracranial portion of the ophthalmic vein were reached, perhaps by partial thrombosis, as there was no exophthalmos of the left eye.—K. SECCEL, *Klin. Monatsblätter f. Augenheilkunde*, Aug., Sept., 1907.

The Prophylaxis of Ophthalmia Neonatorum.—After giving a history of the treatment of ophthalmia neonatorum, and showing the great results obtained by careful treatment the writer gives the following conclusions:

1. That the responsibility for the control of ophthalmia neonatorum rests with the state and

should find its expression through the department of public health.

2. The duty of pointing out its dangers, its prevalence, its prophylaxis and its treatment and suggesting measures for its relief through the proper channels remains with the medical profession.

3. To wipe out this disease as a cause of blindness the public must be better informed concerning it, through various social organizations, the material coming from some authoritative body like the American Academy of Ophthalmology.

4. To accomplish effective work a concerted effort should be made to secure uniform laws governing the midwives in the several states and in federal territory, such as exists in many European countries, and putting them under the surveillance of the department of public health. If the midwife is to be held responsible for a failure to employ prophylaxis it is only just that a pure and safe preparation should be put in her hands. The centralization of the authority for the control of the midwives in the state department of health would contemplate an examining board and registry in every county of each state.

"A disease occurring sporadically and which is endemic can be controlled only by organized and concerted effort. It is most important, therefore, in order that no false move be made, that the procedures to be determined upon should originate with the ophthalmologists and obstetricians. Their practicability must be assured by those expert sanitarians engaged in public health work. Then the measures recommended should be carried out by an organized movement in every state in the Union. A state committee should be appointed and through this should be secured the appointment of a like committee in each county. This latter body would ultimately become the board of examiners for midwives. It would be most desirable if in every instance the local health officer should be a member of this committee. Such a general and concerted effort made throughout the country would in a comparatively short time so limit infections and improve methods of treatment that the disasters following ophthalmia neonatorum would practically cease—that this prolific cause of blindness would be controlled—millions would be saved to the commonwealth and the happiness and efficiency of humanity enormously augmented."—LEWIS F. PARK, *Am. Journ. Ophthalmology*, Oct., 1907.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

The Conservative Treatment of Tuberculosis of the Genitourinary Organs.—MR. GODLEE of London brings forward strong evidence as to the value of a conservative line of treatment in this so often unfavorable class of cases. It is his belief that tuberculous disease of the genitourinary tract is at least as chronic as, and perhaps even more disposed to undergo spontaneous cure than, that of other parts.

In renal tuberculosis GODLEE is opposed to removal of the affected kidney if it causes no decided symptoms, even should the evidence be against the presence of any disease in the other, and of this he thinks it is impossible to be sure even by modern methods, such as ureteral catheterization, and he believes that there is a chance of the unaffected kidney escaping for a long time or altogether if the affected one be not removed. But even if the symptoms are sufficiently severe to warrant exposure of the kidney, the cautious surgeon will always select the least serious operation. In those cases in which the organ has been converted into a mere shell of renal tissue, enclosing large collections of cheesy matter, nephrectomy is, of course, imperative, but where the disease is confined to localized patches of tubercle, while the remainder of the kidney is normal or moderately so, it is better to trust to the recuperative powers of nature and to remove only what is absolutely diseased. Cases in which the principal symptoms are due to pyelitis are best left alone if there are no symptoms, or drained if there are, unless the ureter is blocked, in which event the kidney is bound to become disorganized and nephrectomy will be required.

Turning to tuberculosis of the bladder, GODLEE likewise advocates a conservative line of procedure. Too active treatment in tuberculous cystitis may do harm, and if the catheter or cystoscope be employed, this should be done under the most rigid antiseptic precautions.

In tuberculosis of the testicle GODLEE has given

up removing every tuberculous testicle, however quiescent, if no signs of tubercle could be found elsewhere, because it has so often led to disappointment, the patient returning before long with the opposite testicle affected, and he is equally opposed to extensive operations upon the vas deferens and seminal vesicles. On the other hand if one testicle is completely disorganized, or if it be causing much pain or inconvenience, its removal, together with as much of the vas as can be reached, is indicated, although even here he has found that in most instances the removal of the epididymis is equally efficacious. Excellent results may also be obtained from thorough curettage. If later the other testicle becomes affected, it is preferable to excise or curette only what is obviously diseased, since when a small portion is left behind it furnishes sufficient secretion to prevent the undesirable sequelæ of complete castration.

One of the most interesting topics discussed in this lecture is the management of tuberculosis of the prostate gland. This will depend essentially upon whether an abscess or ulceration results, since even considerable deposits of tubercle may occur in the prostate without any symptoms whatever. If an abscess develops, perineal incision and possibly curettage of the prostate may be required, but otherwise—and even in cases of severe ulceration about the bladder neck—marked relief and an apparent cure may be brought about, provided renal complications be absent, by conservative treatment such as rest, hygienic measures, local applications and sedatives. Thoroughly adequate nutrition, sunlight and fresh air are just as valuable agents for combatting tuberculosis of the uro-genital tract as they are generally conceded to be in the care of phthisical patients.—*Editorial comment from International Journal of Surgery on views of R. J. GODLEE, Lancet, Dec. 14, 1907.*

OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

Ear Affections in Diseases of the Genito-Urinary Tract.—The most frequent form of ear affection in nephritis is the otitis acuta hemorrhagica. (Schwartz, Trautmann, Buck.) There are ecchymoses on the drum membrane, or, the drum membrane is bulging on account of the filling of the tympanic cavity with blood. Pain may be present as well as more or less great hearing disturbances, which are usually combined with noises. Besides this form there is the common otitis media acuta (Roosa, Buerkner). The inflammation of the middle ear is a very important complication of scarlet nephritis. Several authors regard it as prognostically important, because there is an increase of discharge when the nephritis becomes worse, and vice versa. In Haug's case the symptoms of nephritis became less plain after opening of the mastoid process, but reappeared in full force when pus stagnation occurred, which was caused by granulations. Ear disturbances occur very frequently in affections of especially the female genital tract, in physiologic and in pathologic conditions. The external ear is comparatively seldom, more frequently is the middle and most frequently the inner ear affected.

Patients sometimes complain before each menstruation and pregnancy and before the climacterium of a burning sensation, sometimes of unbearable itching in the region of the auricle and of the external meatus. During the climacterium Sendziak observed extraordinary tenacious inflammations of the outer ear canal, either circumscribed (furuncles) or diffuse, also eczema and herpes auriculæ.

Relatively frequent are hemorrhages from the ear preceding menstruation or replacing it (*Menstruationes vicariæ*). An interesting case showing without any doubt the causative connection between diseases of the ear and disturbances of the genital sphere is given by Baratona, who observed hemorrhages from the genital organs after each operation for earpolyps. These hemorrhages are usually accompanied by an "aura" in the form of headache, noises and dizziness. Usually the hemorrhage is unilateral. The quantity differs. There may be a few drops, or an amount corresponding to that of the genital organs. Mostly the drum membrane is affected and the external meatus, namely the opening of the ceruminous glands, less frequently the middle ear, when there is a pus formation with granulations, and only exceptionally the inner ear. The physiologic conditions, especially in women (menstruation, pregnancy, climacterium), predispose to acute inflammatory processes similar as in the pharynx.

Also the existing pathologic conditions in the

hearing apparatus (suppurations) are frequently considerably aggravated as Bezold has shown, who examined these conditions especially. In one hundred and ninety cases of ear suppuration in women, he noticed seventeen and nine-tenths per cent made worse on account of functional disturbances. During menstruation, climacterium, and pregnancy the inner ear may be affected, which is proven by subjective noises and the more or less diminished power of hearing. The latter appears slowly and is little affected by treatment.

Pregnancy and sometimes puerperium have an unfavorable influence upon the function of the ear. The possibly present pathologic conditions of the ear can be considerably aggravated in these cases. Only exceptionally improvement of hearing and of the noises have been noticed after delivery.

Also endo- and parametritis, salpingitis, and neoplasma can cause ear disturbances. Scanzoni observed transitory deafness after application of leeches to the vaginal portion of the uterus.—Dr. J. SENDZIAK, Warschau, *Archiv fuer Ohrenheilkunde*, Volume 73, Festschrift.

Paralysis of the Nervus Abducens in Otitis.

—There exists a typical clinical picture which is characterized essentially by acute suppurative otitis media, intense pain, especially in the temporal and parietal region of the affected side and by paralysis of the nervus abducens of the same side. Exceptionally, the clinical picture can be produced by a chronic middle ear suppuration which has become acute. In about half of the cases accessory symptoms can be present, which depend upon an irritation of the trigeminus and of the oculomotorius, or of the meninges. Sometimes reactive mastoiditis and circumscribed extradural lesions confined to the lateral sinus occur as complications. Usually, a complete cure results, and only rarely death. The pathological and anatomical process consists of a propagation of the infection of the tympanum to the tip of the pyramid by the way of the peritubal pneumatic spaces and the canalis caroticus. It is an osteitis confined to the tip of the pyramid and perhaps a corresponding pachymeningitis. Not all cases of paralysis of the abducens belong to this clinical picture. Among the most frequent are the deep extradural abscesses on the upper border of the pyramid. These extend toward the tip of the same, and also the diffuse osteomyelitic processes of the pneumatic part of the temporal bone which reach the tip of the petrous bone. These cases do not belong to the typical ones.—Prof. G. GRADENIGO, Turin, *Archiv fuer Ohrenheilkunde*, Volume 74, Festschrift.

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CARCINOMA OF THE PANCREAS.*

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Calumet.

Of the various parts of the body so prone to disease of one form or another, the pancreas, if we are to judge from the literature upon the subject or upon our personal experience, seems to have been made heir to an enviable immunity.

We find, however, that the dread disease cancer, both in the form of carcinoma and sarcoma, invades even this secluded and favored organ at times, though as recent a writer as Fowler in his "Treatise on Surgery" dismisses the subject with the statement that "Carcinoma of the pancreas has not yet assumed a position of sufficient importance to entitle it to discussion except by the pathologist."

It is for the purpose of presenting the clinical history of a case of primary carcinoma of the pancreas which recently came under my observation, that I wish to place before you tonight a few data which I have been able to gather bearing upon the subject.

Of new growths in the pancreas, carcinoma is probably the most frequent: adenoma, lymphoma, and gumma, being very rare. (Osler.) Among 23,611 au-

topsies from the Vienna hospitals there were 2,005 cancers, of which twenty-nine were of the pancreas, though no distinction is made as to what proportion of these were primary and what proportion secondary. From these and other statistics we may infer, however, that the disease is primary in less than one per cent.

Its occurrence as regards age is the same as in carcinoma in other parts of the body, being most frequent between the ages of forty and seventy years.

The seat of the neoplasm is most frequently in the head of the pancreas. The autopsy reports of the Vienna General Hospital, covering a period of ten years from 1885 to 1895, cite thirty-two cases of primary carcinoma of the pancreas in which the disease was found in the head in twenty cases, twice in the body, three times in the tail, and once throughout the entire gland.

The size of the tumor, as in instances of carcinoma of other parts of the body, will depend largely upon the duration of the disease at the time of observation; consisting of a small nodule or a mass sufficiently large to be palpable and impinging upon or occlude by compression

*Read before the Houghton County Medical Society, Jan. 6, 1908.

the pylorus or the common duct, or both, causing great distention of the gall bladder or in cases with localization in the tail, involving the left kidney or spleen. Cases are reported in which, following adhesion, perforation has occurred into the stomach through the posterior wall, into the duodenum or even into the portal vein causing fatal hemorrhage. (Nothnagel.)

Symptoms. The symptoms of pancreatic carcinoma will depend somewhat on the stage of the disease.

(Nothnagel's classification.)

First. Functional disturbance on the part of the pancreas.

Second. The effect upon adjacent organs.

Third. Symptoms of metastases or general carcinosis.

Disturbances of digestion are manifested by the usual symptoms of indigestion of indefinite origin, as anorexia, epigastric pain, sense of fullness after eating, eructation, heartburn and vomiting. The vomitus consists of partly digested food. A progressively rapid emaciation is noticed in all cases, this feature being more prominent and more rapid than in carcinoma in other parts of the body.

Jaundice is a marked symptom where the disease is located in the head, as it is most frequently, and the character of the production of the jaundice is worthy of note in that it is of diagnostic importance. It is very slow but progressive in its manifestation due to the gradual but also progressive encroachment upon the bile ducts until ultimately an intense icterus results which is permanent, accompanied by pruritus and other secondary symptoms of jaundice, such as cholemia, bile in the urine, etc.

Referring again to the pain from this disease, it is noticeable that it is frequently a referred or radiating pain as will be seen in the case to be reported, which is readily explained by a study

of the anatomical distribution of the nerve supply.

Park (System of Surgery) makes the rather surprising statement that "pain is rarely present." This view is at variance with most other writers to which I have been able to refer, and certainly is not borne out by the case to be reported, though a few cases are recorded in which pain was minimum. This peculiarity might possibly be partially explained by individual susceptibility, it being, of course, recognized that certain individuals are much more sensitive to pain than others. Nothnagel states that "the pain is so severe that it is out of all proportion to the extent of involvement."

This pain may be localized in the epigastrium or as stated above referred to the shoulders, right hypochondrium, back or chest in disease of the head of the pancreas. In the case to be reported, pain was intense and was entirely a referred pain located in the middle of the back at the level of the eighth dorsal vertebra and to the left side of the chest in the mid-axillary line at the level of the ninth and tenth rib, i. e., in the splenic area.

The character of the pain when present is described usually as very intense: boring, burning or stabbing in character. These patients frequently succumb before a tumor has acquired a palpable size, but a fixed tumor in the upper abdomen may be considered in the symptomatology, tumors of other organs having been eliminated by differential diagnosis. The growth will doubtless be large before it can be palpated, on account of its deep-seated origin.

Examination of the stomach contents furnishes little of value. Those of which reports are available show total absence of hydrochloric acid in many cases and a very low acidity in others, although the stomach itself was entirely free from disease. Diabetes and fatty stools are occasionally present, but not with suffi-

cient frequency to make their absence of diagnostic moment. Where the bile ducts are occluded by pressure or secondary disease, stools are naturally acholic. Mention is made (Nothnagel) of the size of the stools; they being very copious and out of all proportion to the amount of food ingested, due to the passage of food undigested and unassimilated from functional disturbance.

Cachexia is marked and it seems to be fairly well established by observation that it is more marked and more rapid in its manifestation in pancreatic carcinoma than of carcinoma of other organs. Apathy in advanced cases is intense, due to extreme weakness, the weakness being out of proportion to the inanition. (Nothnagel.) Blood, either in the vomitus or stools, is absent, unless perchance the growth has ulcerated through into the stomach or duodenum, when it might of course be present, but this does not occur with sufficient frequency to be of diagnostic moment and its absence is without significance.

Metastasis occurs with greatest frequency in the liver, gall-bladder and ducts, although any of the adjacent parts may be involved in the carcinomatous mass, either by adhesion or actual carcinosis, between which a differentiation must be made by aid of the microscope.

Diagnosis. As regards diagnosis, one may safely say that it is a disease extremely difficult of differentiation when situated in the head of the organ and next to impossible of differentiation when located in the tail, unless guessing be considered knowledge. Being situated most often in the head of the pancreas, we are dependent largely upon symptoms produced in adjacent organs rather than upon symptoms on the part of the pancreas itself. The cardinal points which might lead to a correct diagnosis are jaundice, with its consequent manifestations in the liver and gall-bladder; tumor, referred pain, cach-

exia, emaciation and the chemical changes in the stools and urine caused by alteration in the pancreatic function.

When both jaundice and tumor are absent, a correct diagnosis is probably impossible. The definite characteristics of the jaundice must be borne in mind; that is, that it is gradual but progressive in its development, and when once developed is chronic in contra-distinction to jaundice of gall-bladder disease which is more evanescent. A similar jaundice may, however, be caused by flexure of the common duct or the progressive contraction of inflammatory adhesions. Jaundice may also be slow but progressive in development from concretions which at first merely narrow the common duct but ultimately close it, as they increase in size by accretion. The jaundice from gall-bladder disease is, however, more rapid in its development and less likely to be chronic. The history of previous attacks of biliary colic would be of service. The gall-bladder in chronic gall-bladder disease is likely to be atrophied and the liver enlarged while in pancreatic carcinoma, the liver undergoes no change until secondary carcinosis occurs and the gall-bladder may be much enlarged from its engorgement with bile.

Tumor can be demonstrated in from one-fourth to one-fifth of the cases, and here confusion is likely to arise between pancreatic tumors and tumors of the pylorus, duodenum or tumors of the gall-bladder or ducts. The principal point of differentiation available is the fixation of the pancreatic tumor as compared to the mobility of others. If the tumor is in the tail of the pancreas, we have but one differential point, which is its fixation and here also must be borne in mind tumors rising from the upper pole of the left kidney or the suprarenal body. The presence of diabetes and fatty stools, in conjunction with other symptoms, is suggestive, as well as the

rapidity with which cachexia and emaciation occur. An X-ray examination might be of some assistance.

The course of the disease is rapid, many of the cases succumbing in less than six months from a high degree of marasmus.

The treatment from the medical standpoint is purely symptomatic, and from the surgical is not encouraging, though within the past two or three years more advancement has been made in its surgical treatment. Medical treatment enables us to relieve but temporarily the digestive disturbances.

Pain is the symptom for which the most urgent demand for treatment is made, and for this we must resort to the usual opiates. The X-ray might be tried in these cases for the relief of pain as in other cases of carcinoma, but I cannot speak from experience as to its efficiency.

When an early diagnosis of cancer of the tail of the pancreas can be made, a resection of the splenic end offers good chances of recovery from the disease without serious interference with the digestive processes. Carcinoma of the head of the pancreas offers less hope of relief from surgical intervention.

The first case of operation for pancreatic cancer was reported by Prof. Ruggi of Bologna in 1889. This proved to be an adeno-carcinoma of the tail of the pancreas in a woman of fifty, who made a good recovery. A few other cases are on record for removal of cancer of the tail, but they present no especial points of interest clinically. If relief is demanded on account of gall-bladder distention and absorption of bile, cholecystotomy or cholecystenterostomy may be performed.

In connection with this subject, I should like to present the history of the following case:

Male, 44 years. Miner by occupation, had worked steadily up to June, 1906, though for

some weeks previous to this had complained of some diarrhea and indigestion. In June he was obliged to give up work because of weakness which he attributed to indigestion. During this time he had pain periodically in the epigastrium and left side of the chest and some diarrhea and was treated symptomatically for stomach trouble by several physicians. Under this treatment he improved and was able to return to work until Jan. 1st, 1907, when he was again obliged to stop on account of increasing weakness and pain, the pain being principally in the left side of the chest and was attributed by him to a blow which he had received on the chest some weeks or months before.

He came under my care about the middle of January, 1907, at which time he was greatly emaciated, extremely weak and slightly cachectic. Pain was extreme and was entirely referred, being localized very accurately in the middle of the back at the level of the 9th dorsal vertebra and to the left side of the chest and in the mid-axillary line at the level of the 8th and the 9th rib. Constipation was marked and the stools rather light in color though not acholic. The abdomen was retracted, no tenderness present on pressure and no palpable tumor.

I have access to the results of two examinations of the stomach contents made previous to the time he came under my care which are as follows: The first made July 19th, 1906, showed free HCL absent, total acidity 4, organic acids 2. Microscopic examination showed nothing abnormal. A second examination, made July 26th, again showed a total absence of HCL and a total acidity of 4. Microscopic examination showed the presence of some yeast cells. An examination made January 2nd, 1907, showed free HCL 4, total acidity 17, lactic acid negative. These examinations being far from conclusive, do not point to anything more definite than an aggravated hypochlorhydria.

Following these examinations he was treated symptomatically, without improvement, and continually lost ground and suffered more and more from intense pain.

An X-ray examination made shortly after, revealed the presence of a tumor in the upper abdomen, lying to the left of the spine. The shadow cast was fairly distinct and showed no movement with respiration but was not sufficiently clear to enable us to determine as to its origin.

On February 22nd, an exploratory operation was performed. An incision about four inches

long was made through the outer border of the left rectus above the umbilicus. Investigation of the abdominal contents revealed a mass the size of a large orange, having its origin in the tail of the pancreas, intimately adherent to the upper pole of the left kidney and firmly adherent posteriorly. On account of these conditions the tumor was considered to be irremovable. In an attempt to remove a section for examination, I broke into a broken-down area of brain-like consistency which rendered closure of the abdomen inadvisable for fear of sloughing and infection. A Miculicz drain was therefore inserted and the

abdomen closed around it as far as possible.

The patient showed no ill effects from his exploration and the wound closed in gradually behind the drain though not entirely closed when the case was terminated. He continued to lose ground, became extremely weak and emaciated and suffered most acutely, death occurring on March 22nd, one month following the operation.

Post mortem examination revealed no secondary carcinosis and confirmed the findings at the time of operation. Pathological examination showed the case to be one of primary adenocarcinoma of the pancreas.

DEMENTIA AMERICANA*

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Kalamazoo.

Within the past few months in a neighboring state a criminal trial has attracted an almost national attention largely due to the prominence in public life of the victim and to the wealth and unfavorable notoriety of the accused. In the course and management of this trial one of the distinguished attorneys coined for the occasion a new term or classification in the realm of mental diseases. To this particular case, i. e., the accused, he applied the term "Dementia Americana," and so apt did it seem that it became the common property of all the newspapers and a glib term of reproach on the tongue of many who were inclined to comment on the conduct of similar trials should the defense be insanity or any other impairment of the mental faculties. What did he mean and what does the general public understand by the term which has come into such sudden demand in the non-professional world as designating a characteristic or fault of what is known as the American people? It practically amounts to this—

that it is a privilege assumed by the citizens of the United States in certain circumstances to be their own prosecutor, sheriff, judge, jury, executioner.

In our boasted state of civilization and advancement, how should such a relic of savagery and primeval animalism linger and be seriously tolerated by our commonwealth and exemplified by our judiciary? We must remember that the judiciary decides trials and makes judgments as popular feelings demand, i. e., interpretations of the law vary from decade to decade as civilization varies and hence we must look to our social body for a solution of the question.

Are Americans entitled, more than the inhabitants of the other countries, for instance, the European countries, to a special type of mental infirmity, and if so, what occasion arose at this particular time to bring forth this sudden comprehension of a national characteristic? Has the fault always existed and were our people so dull as not to be cognizant of it until this year, or has it simply been tolerated as a relic of savagery as are our native Indians and like the

*Presidential address delivered at the Annual meeting of the Kalamazoo Academy of Medicine, Dec. 10, 1907.

Indians to become noticeable by rapid disappearance?

We must first define the American people and for this paper will limit our observations to the United States. If our people have a particular form of dementia or mental impairment, they should differ from the inhabitants of other countries, or social environments and regulations should be different. Let us briefly examine into the development of our population, looking for a possible source of social fault. National and social characteristics are matters of slow growth and we must look well back if we would arrive at an accurate comprehension of these traits. Our country, to begin with, as every school-boy knows, was only a few short years ago the home of a race of savages of which the world has seen no equal. Our New England ancestors, who had little to contend with in peaceful old England except matters of religious belief, were at once put in a position of bloodiest warfare with the most unrelenting foes known to mankind. This continued unceasingly until the Revolution, throughout New England, New York, Pennsylvania and Ohio. The early Dutch in New York did not meet such warlike native Americans but their former peaceful and quiet life instantly became one of strife and daily warfare with both the English and the Indians.

The Cavaliers in Virginia and the Huguenots of the Carolinas met every bit as fierce and murderous an opposition as did our New England forefathers. After these came the rapid influx of the negro into the southern portion of the United States, and we have a rather inconsistent array of circumstances in the beginning of this country as regards liberty, and fair dealing among men relative to the respect for what we now know as law and order.

Then followed the long and bloody war with their old constant foes and the

British, in which every able-bodied man from one end of the country to the other necessarily took part and became an adept in the art of using arms. In the period following the Revolution up to the Civil War the whole country was practically one vast military camp, i. e., every man owned weapons and carried them at will, every household had its full complement of rifles which, to be sure were mostly used in providing for the family or in hunting; but when occasion arose as in the war of 1812, the Mexican war and on the frontier in the constant war and struggle with the aborigine, it was found that our people had developed an astonishing ability and familiarity in the use of these death-dealing instruments.

The second immigration may be said to have been the Irish to New York and neighboring seaport towns between 1820 and 1850. They came fleeing from oppression of the worst possible kind, and were quite inclined to regard the government as only an oppressor.

The Scotch in lesser numbers came to the middle west, and just a few years before the Civil War the Germans began to seek freedom.

Then came the terrific struggle of the North and South with all of its disregard of law and order so graphically described in one word by a most famous soldier and statesman of the period.

Following this war came what we may empirically call the third immigration. The Germans in greater numbers began to move westward and following the Franco-Prussian war, transportation companies could scarcely furnish accommodations sufficient to meet the rush. Of course, numbers from other European countries came steadily all the time. About 1890 a change in the general character of the new arrivals took place, and this brings us to a period which we may designate as the fourth immigration. This is the present era

or the era of the Hun, the Italian, the Pole, the Russ, the Scandinavian and the Hollander.

The latter two come from peaceful and law-abiding countries, but the Pole, the Russian Jew, the Italian and the Hungarian come from oppressed lands, and do not regard the government in any light but that of a taskmaster to be thwarted at every turn.

Let us glance at the magnitude of this addition to our numbers from European countries. Prior to 1900 the largest immigration was from the British Isles and Germany, the latter country giving us the greatest number steadily, as great as two hundred and fifty thousand in one year. Our census in 1900 gave United States ten million foreign born and the rule of newcomers since that time has been a million a year, and now it seems likely to pass that point. In the spring of 1906, in four days fifty-two thousand immigrants were landed in New York alone, and last year in one day twenty-five thousand persons passed through Castle Garden. Thus it is easily estimated that there are at the present time in the United States at least twenty millions of foreign people.

Have we assimilated and can we assimilate this mass of humanity to the standard of the old immigrations or to a higher standard than the normal status of the immigrant? Prior to 1900 not very energetic means were employed by the government to protect the country from undesirable citizens except the Chinese Exclusion Act, which was not bred in scientific minds, but in the dream of political bosses of the Pacific slope. Magazine writers and newspaper enthusiasts had for years flooded the country with the slogan, "Let them come. There is room for them all and opportunity for them all to become Americanized."

But decade by decade it is evident to anyone that this is a fallacy. At the close of the Civil War the addition of

about four million negroes was practically a huge immigration into the country south of Mason's and Dixon's line. They were given citizenship and have they ever been assimilated? They are today disfranchised, their citizenship practically taken away, and the Americans, or those who would assimilate them, have given the task up in utter despair. They show a criminal record and criminal tendencies that are simply astonishing. Of 7,386 people charged with murder in the United States in 1890, 2,739 were negroes and 1,213 foreign born. Therefore one-fourth of the population at that time did four-sevenths of the homicides, leaving 3,434 homicides for the remaining forty-five million people, or practically one to fifteen thousand American born and one to every forty-five hundred negroes.

The large majority of immigrants from all countries coming to the United States are almost certainly of the poor classes, and the national government has been under the necessity of establishing a system of most rigid supervision in order to turn back the helpless and undesirable. From the million annually coming, twelve thousand are sent back as criminals, paupers, insane or invalids from physical ailments.

Can we say that all of these people with their old country customs, virtues and vices have been absorbed and converted to a distinct type as rapidly as immigration has increased? One or two illustrations will easily demonstrate the erroneousness of such a belief.

From the United States census of 1904, I quote 28.8% of all white criminal prisoners as foreign born, while only 21.9% was their percentage in number to the general population. New York state, absorbing the greatest number of immigrants, shows in 1875 a ratio of one insane person to every 675 of the population; in 1904, one to every 294. In 1906 46% of the whole number of admissions

to the New York asylums were of foreign birth while the foreign born represent but 26% of the population.

On October 13, 1907, there was published in all the prominent daily papers a news item to the effect that for a period of 24 hours no murder had been reported in New York city. This was accounted as a most rare bit of news equal to the record breaking of the newest trans-Atlantic steamer.

We thus discover that we are receiving an inferior race of people, whether made so by hardships and poverty or inherently so it matters little. In examining the characteristics of the immigrants after settlement we find that they form colonies as much as possible and reproduce the old home surroundings to the best of their ability.

The Jews in New York huddle in their new ghetto. The Huns flock to the squalor and poverty of the coal mining regions of Pennsylvania; the Poles and Italians form colonies in our large cities and show little ability above that of the poorest laborer. Those of Anglo-Saxon birth, it would appear, have been more easily convertible to the ideal citizen of our great republic. I have not mentioned the Irish member of our family as he has been one of us from the beginning and is always ready to be assimilated and converted to any circumstance and situation. What is then the standard of American mentality? Is it not evident that with such a diversified people the standard of mental qualifications must vary and at the same time the character of mental impairment? Would it not seem that our mental impairment, other things being equal, would correspond to the mental impairment of those nations whence our immigrants are drawn?

A careful study of the types of insanity in other countries shows only the differences due to local social regulations. Thus in the British Isles we find

very free and unrestricted sale of intoxicants and 26% of the insane are alcoholics. We do not have as large a list of historical insane as our European neighbors can boast of, but for the time that we have existed we can boast of a favorable contemporaneous list. We are also free from the curse of degenerate royal families made so by state marriages and unlicensed dissipation. But in their place we have the corresponding degeneracy as a sequence of the marriage and intermarriage and dissipations of our extremely rich. Although our country is young, this class has especially in the eastern part of the United States shown rather startling development in numbers, an astonishing liability to degeneracy and as great a capacity for dissipation as their royal neighbors. We have also our vast army of hoboes and tramps, a class not so prevalent in Europe. From among the younger portion of this class of our defectives the regular army in times of peace enlists many, and hence the enormous ratio of desertions.

France shows a much smaller percentage of insane from syphilis by reason of the governmental regulation of this disease, and so on each country will show a characteristic of its own due to some social or legal requirement. In turn we may ask ourselves, if our nation is made up of all these characteristics intermingled, then we must look to some social or legal condition that will permit us to acquire an unusual type of dementia, so-called, for 'tis evident that it is not to be credited to the individual. What then is this social or legal condition which is so characteristic of the American people and because, if such, is such a theme of criticism by our neighbors?

The Dementia Americana, so coined by this attorney, as a term of derision or criticism of a characteristic of our people, is, as before mentioned, the gen-

eral sanction given to every American citizen to be his own judge, jury, executioner, under certain conditions. In the whole civilized world the law contemplates the defense of the person or family from attempted destruction or murder by justifiable homicide. In the early years of our country the laws were English and the basis of all our laws today are English. English laws permit a justifiable homicide only strictly under the above definition. We have seen, however, that from the birth of this nation to the present time, it has been the custom of almost all men to be familiar with weapons, and of most men to carry them for protection. Why? First, because of the many foes daily encountered; second, because of the weak administration of the laws and the almost absurd performances known as court trials. I, of course, refer to trials for murder, such as the trial in which the term *Dementia Americana* originated. The bounds of the justifiable homicide were, in the early years of this country stretched even beyond the breaking point. The native Indians were ruthlessly slaughtered for the most trivial offenses and the acts condoned by local authorities. An old resident of Kalamazoo has told me that in the early days of Kalamazoo two Indians one morning were found to have killed a cow belonging to a citizen of the village, and were dressing the carcass at the foot of the hill on West street. The citizen being informed of the circumstance proceeded at once to the spot with rifle in hand and shot both Indians. All our frontier life has been marked by just such crude administration of justice.

The gold excitement of California found the local judiciary wholly inadequate to manage the situation, and the vigilance committee of San Francisco of the '49 days, was a typical example of the assumption of the mechanism of the courts by an unauthorized people. The

germs of lawlessness implanted in the Golden City at this period yielded a rich harvest on the occasion of that fair city's first serious calamity last year.

Even today in all large cities, strikes in the interests of unions are such everyday exhibitions of the disregard for law and order and are regarded with such favor by the general populace, that destruction of property, violence, injury and even murders are commonly accorded to be the usual accompaniments of this particular phase of our social life. The Haywood trial, with its long list of assassinations, murders and so forth, is yet a favorite theme for magazine writers. Even in our own Kalamazoo in the past year we have had evidences of the same spirit.

The South in its attempts to manage the negro is a familiar situation to us all. No longer do lynchings, so-called, have any occasion for remark; it is only when a lynching does not occur under certain conditions that anyone takes notice. Immediately following the Civil War, the "carpet-bag" epoch, the Klu Klux Klan and its assumption of the functions of judge, jury, and executioner, were potent factors in remoulding a sentiment averse to the law and rights of man. The primitive conditions of life, the weak local government, the moonshiner, the feudist, brought about a state of affairs in Kentucky which has tended to destroy all respect for law and order. Similar observations might be extended over the whole country showing the consequence of a weak administration of the laws, the results of the election of the judiciary for short terms, the influence of political parties and politicians and grafters of all kinds who seek to influence the conduct of trials of justice.

The fierce contests of lawyers are such that often the decisions of the court rest simply with the party stronger in legal talent and not by virtue of the scale of

justice. Witnesses are regarded by the legal contestants as merely so many pawns to be moved about court, some to checkmate opposing witnesses, others to be used figuratively as clubs to beat down weaker foes. Thus has arisen the deplorable spectacle of the use of expert witnesses and especially those relating to medicine.

This custom of conducting trials and this spectacular and undignified and unfair treatment of witnesses is of such long duration and of such common practice that it is looked upon as complacently as a lynching in the South. Thus has come into almost universal and great popularity the conception and use of the unwritten law. The unwritten law did not originate in this country, and it is as old as time itself, being really a relic of barbarism, and its use and observance in some other and better governed countries is reduced to a minimum while in our own its exploitation is observed in almost every daily newspaper. One of the popular novels of the season listed in today's advertising bulletins from one of the great book-publishing houses treats of the unwritten law in high life in New York, and its sales have already passed the 800,000 mark.

The unwritten law as practiced and approved in this country is really a quasi-justifiable homicide. Its practice and general approval have been of slow growth and the result of the exigencies of the rapid development of a new country and a weak executive feature. Crimes which are justified in the name of the unwritten law are known as crimes of passion. It might be truly said that all crimes are crimes of our passions, as of love, ambition, cruelty, and so forth; but in this connection I refer to crimes resulting from the passion love and its accompaniments, jealousy and vengeance. These passions beset the mind with more force than any others known, and result in crimes of an impulsive

character or in an obsession or irresistible impulse and as a sequence of these what appears to be a deliberate murder. The first are usually committed by men of quick tempers and impulsive natures, born fighters, as it were; the latter by the individual who can develop an obsession, namely, the degenerate, in a greater or less degree the half-insane, the semi-responsible of whom there are many in every community.

Prof. J. Grasset, of the University of Montpellier, France, in his recent monograph "*Demi-Fous and Demi-Responsables*" would not adopt the generally accepted classification of sane and insane by hard and fast lines as is done by our courts; but would make a classification shading from normal psychism to dementia, limiting the responsibility to demi-responsibility—limited responsibility—attenuated responsibility or in common language rate the mental capacities of the race not as all sane or insane; but as sane, half insane and insane. In this class of half insane he places many noted historical characters and men of genius. Such men as Pascal, Balzac, Hugo, Moliere, Byron, Tolstoi, Newton, Darwin, Schiller, Chopin, Cromwell, Goethe, Mozart, Beethoven, Ampere, Napoleon and many others showing unusual brilliancy of mind in some directions and decided weaknesses in some others. Controversy over this subject springs largely from the lack of definition as to what is mental impairment, and what is mind? Answers to these questions vary as do the professions and learning of those who attempt to give the definition, be he alienist, judge, theologian, philosopher or what not.

The crude and unscientific methods by which our courts measure the mind do not take any cognizance of these conditions and hence the prisons of the country receive the obsessional criminal or the verdict of justifiable homicide gives him his freedom. In Massachusetts

from 1895 to 1900, 778 persons were transferred from the prisons to the asylums; 24% of the life men in the New York prisons are in the criminal asylums. Is it anything strange therefore, that this country of ours, being subject to so many and such unfavorable social conditions, should appear to our legal friend as developing a special type of mental disease so glibly styled *Dementia Americana*? 'Tis said that he who criticizes the existing order of things should offer the remedy and I will therefore conclude with the following propositions:

1. The degenerate and half-insane should receive recognition as such by the courts.

2. Prisoners of this class should not

be committed to either an asylum for the insane nor to a penal institution; but there should be schools and institutions especially designed for their detention, care and training.

3. The use of medical experts by the courts should follow the example of Michigan and Connecticut which provide for the appointment of experts by the judges and their instructions to aid him rather than to be contestants in the case.

4. All criminals should be passed upon or examined by an alienist before being sentenced.

5. All prisons and reformatories should be under the supervision and control of alienists and teachers rather than politicians.

The Caduceus, or the insignia of the Medical Department, is of long standing, having been tested for centuries and keeping place up to the present time, states turies and keeping pace up to the present time, states the *Army and Navy Journal*. In the earliest Greek art the caduceus was but a magic wand, without ornamentation. Adorned with laurel wreaths it represented victory. Later as a collection of pleasant traditions concerning the power of the wand and about the gods who carried it, grew up, it became customary to represent it with two serpents—the serpent was typical of wisdom—twined about it. Aesculapius, the son of Apollo, was not the only god carrying the caduceus as his symbol of authority. Mercury on one of his errands from Olympus, saw two snakes fighting. Since it was his business to settle such disputes, he caught up the snakes, twisted their tails together and twined them about his staff. In later mythology, when the other attributes of Mercury were diminished, and that of his office as Olympian messenger

was magnified, it became customary to represent him in art as wearing winged sandals and a winged fillet about his head. It was natural, then, later to add the spreading wings of his staff and thus complete the idea of his swift passages upon the errands of his father Zeus. It can readily be seen how the wand with its serpents and wings representing magic powers in earth and air could be taken up as an emblem of healing. The wisdom of the creeping serpent was supposed to have enabled them to search out vegetable bodies having healing powers. The men of the Middle Ages, when all healing was thought to come about only through the agency of incantations and various charms, when the world was indeed half pagan, continued to use the caduceus as the sign of the healing art. "From millenium to millenium, from century to century, from decade to decade, from year to year, the caduceus has kept the first place to indicate medical efficiency. Could there be a better emblem for the Medical Department of the United States Army?"

SERUM DIAGNOSIS IN TYPHOID FEVER.

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Among all the phenomena of serology and the knowledge we have thus far learned concerning reactions to bacterial products, it seems to me that few offer greater promise of practicable applicability than that of bacteriolysis. As a means of ascertaining the identity of an infecting bacterium, when rendered sufficiently simple to be practical, I believe that this and the similar phenomenon of hemolysis afford a valuable adjunct to our armamentarium of diagnostics.

Since the discovery of Pfeiffer's phenomenon and the related facts concerning it contributed by Bordet, Gengou, Ehrlich, Morgenroth and Metschnikoff in the few years following, little has been added to our knowledge of this important process. No attempts to make practical use of the facts we have learned concerning the manner in which bacteria are dissolved in the blood stream have met with enough success to cause more than transitory notice.

In 1906, an impetus was given to work of this character by the announcements of Wasserman, Bruch, and Neisser, in a series of communications relating to a test for the detection of syphilitic antibodies in the blood of patients by making use of a manipulation of the various factors entering into the phenomenon of lysis. By this means they were able to demonstrate the presence of syphilitic antibodies and hence unerringly diagnose the infection in a long series of cases no matter how long since the infection was acquired. Since the announcement of their work was made,

various other observers have corroborated their findings, but very little effort seems to have been made to apply the method in the diagnosis of acute processes.

With the idea of simplifying the process if possible, and thereby obtaining a method by which acute infections may be diagnosed readily and to a certainty, a series of tests were undertaken to determine the reliability of the reaction and the earliness of its appearance with reference to some rather typical examples of an acute condition. Typhoid fever naturally suggested itself for a number of reasons, particularly because in our experience, especially in the cases we have had this year, the Widal agglutination test has proven to be singularly unreliable. Of an average of from fifteen to thirty-three cases of fever in our wards presenting the typhoid syndrome and clinically diagnosed as typhoid fever, it has been the exception to obtain a positive agglutination test. An average of about one positive reaction to every ten tests made, is about the proportion of success which has met our efforts and by investigation of the results secured at the other Detroit hospitals a similar report was obtained. But even when the reaction is positive, its appearance is comparatively late, being rarely present before the tenth day.

Other factors militating against the usefulness of this test to the busy practitioner are that it is a procedure necessitating a considerable knowledge of distinctly laboratory methods, and the

expenditure of time he cannot afford to give. With these and other objections before us, we set out to ascertain the reliability of a test for typholysins similar to that devised by Wasserman and Bruch to demonstrate the presence of antibodies in the blood of syphilitics.

The following cases are submitted as proof of our findings:

Case 1.—G. De B., entered hospital Oct. 15, had been in bed at home for nine days, Widal taken twice, each time being negative. Examination of serum for lysins positive on day of entrance. Discharged December 5.

Case 2.—V. E., entered hospital Oct. 3, discharged Oct. 25, had been in bed at home eight days. Widal positive Oct. 4. Examination for antibodies Oct. 4, positive.

Case 3.—C. L. entered hospital Oct. 4, discharged Nov. 13, sick at home four days. Widal negative Oct. 5. Examination for antibodies Oct. 5, positive.

Case 4.—L. A. entered hospital Oct. 5, normal temperature since Dec. 6, sick at home for seven days. Widal negative on Oct. 5 and Nov. 11. Examination for antibodies positive, Oct. 5.

Case 5.—J. L., entered hospital Oct. 11, discharged Nov. 14, sick at home for eight days. Widal positive Oct. 12. Examination for antibodies positive, Oct. 11.

Case 6.—S. M., entered hospital Oct. 24, discharged Nov. 28, throat symptoms for two weeks. Widal negative Nov. 25 and Nov. 3. Examination for antibodies well marked, Oct. 25.

Case 7.—O. D., entered hospital Oct. 31, still running fever, roseola present. Widal not taken. Examination for antibodies marked, Oct. 31.

Case 8.—B. C., entered hospital Oct. 31, has had relapse and is still running fever, sick six days. Widal negative Oct. 31 and Dec. 2. Examination for antibodies positive, Oct. 31 and Dec. 2.

Case 9.—Miss A. J., entered hospital Nov. 14, still running fever, sick eight days. Widal negative Nov. 18. Examination for antibodies positive, Nov. 18.

Case 10.—Mrs. W., entered hospital Nov. 15, still running fever, sick four days at home. Widal

negative Nov. 19. Examination for typholysins, positive markedly, Nov. 17.

Case 11.—D. K., admitted Nov. 16, discharged Dec. 3, no history obtainable. Widal and test for typholysins both positive, Nov. 18.

Case 13.—Miss M. C., admitted Nov. 18, temperature reached normal Dec. 9. Sick three days with fever before going to bed. Widal negative Nov. 19, partial Nov. 23, positive Dec. 4. Typholysin test negative Nov. 19, positive Nov. 26.

Case 13.—J. B., admitted Oct. 31, still running fever, no history obtainable. Typholysin test positive when taken Nov. 3.

Case 14.—H. D. L., admitted Oct. 14, still running fever, having had relapse. Sick three days before admission. No Widal taken. Typholysin test positive Oct. 15.

Case 15.—Mrs. S. Van M., admitted Nov. 11, discharged Nov. 23. Sick eleven days. Widal positive Nov. 11. Typholysins present Nov. 11.

Case 16.—H. Van D., admitted Nov. 23, still running fever. No history obtainable. Widal negative on Nov. 24 and Nov. 30. Typholysin test positive Nov. 24.

Case 17.—T. W., admitted Nov. 1, still running fever. Sick about one week. Widal negative Nov. 4. Typholysin test positive Nov. 2.

Case 18.—C. M., admitted Nov. 29, still running fever. Sick eight days. No Widal taken. Typholysin test positive Nov. 30.

Case 19.—T. K., admitted Dec. 4, still running fever. Sick three days before admission. No Widal taken. Typholysin test positive Dec. 5.

Case 20.—W. K., admitted Nov. 30, still running fever. Sick seven days before admission. Widal positive Dec. 6. Typholysin test positive Dec. 1.

Cases Giving Negative Test Afterward Developing Symptoms of Other Diseases:

Case 1.—O. R., admitted Nov. 17, discharged Nov. 27. No Widal taken. Typholysin test negative, Nov. 19. Diagnosis, autointoxication.

Case 2.—A. M., admitted Oct. 5, died Oct. 19. No Widal taken. Typholysin test negative. Diagnosis, bronehopneumonia.

Case 3.—W. K., admitted Oct. 3, discharged Oct. 17. No Widal taken. Typholysin test negative. Temperature normal after Oct. 8. Cause of fever unknown.

Case 4.—J. G., admitted Oct. 15, discharged Oct. 29. No Widal taken. Negative for typholysins. Diagnosis, acute bronchitis.

Case 5.—J. R., admitted Oct. 23, discharged No. 5. Negative for typholysins. Diagnosis, acute rheumatic fever.

Case 6.—J. S., admitted Dec. 7, still in hospital. Test for typholysins negative. Diagnosis, lobar pneumonia.

Case 7.—J. B., admitted Nov. 9, discharge Nov. 14. Test for typholysins negative. Diagnosis, bronchitis.

Consideration of the results of these experiments point out the following facts:

1. In every case a positive typholysin test could be obtained before microscopical examination showed complete agglutination.

2. In every case which ran a clinical course of typhoid, the test was positive.

3. In cases which afterward proved to be of a different character, the test was unerringly negative.

4. In every case of clinical typhoid the test was positive for lysins as soon as taken, except in the instance of case 12, and even in this instance was affirmative eight days before a Widal was returned positive.

5. The test could be obtained as early as the fourth day of fever.

6. No matter whence the origin of the culture of bacillus typhosus, so long as it was a reliable culture, the results were the same.

In the majority of the cases, cultures were used which had been obtained from Parke, Davis & Co. In three cases, however, bacilli were used which had been obtained directly from the blood of a patient in the bacteriemic stage of the disease.¹ Proof of the reliability of the method obtained, there remained to simplify the test so as to be of practical use.

Before proceeding to describe the manner in which this was accomplished, however, a brief rehearsal of the fundamental principles of bacteriolysis and hemolysis seems advisable.

It is a well established fact that when bacteria are injected into an animal, the serum of the inoculated animal very soon acquires the power of dissolving these organisms with great rapidity. The action occurs in vitro as well as in vivo. Not only is this true of bacteria, but when blood cells from an animal of one species are injected beneath the skin of an animal of different species, serum from the inoculated animal shows a remarkable dissolving power upon corpuscles from the animal against whose blood it has been immunized. This action is termed hemolysis.

Ehrlich and Morgenroth early determined that these reactions were dependent upon the existence in the blood of the immunized animal of two substances. One of these is thermolabile. That is, a temperature of 56°C maintained for thirty minutes suffices to destroy it. This substance, the so-called "something" of Pfeiffer, Ehrlich termed complement, and showed that it was present in normal as well as in immunized serum.

The other substance necessary to bring about lysis, is the result of inoculation. It is called amboceptor or intermediary body, because of its double power of combining with complement on one hand, and bacteria or blood or any other antigen* on the other. The amboceptor is thermostabile. That is, subjecting the serum to a temperature of 100°C does not destroy it. The two factors then, complement and amboceptor must be present in a given serum if solution of the antigen is to be effected and upon their presence the theory of the test depends.

(1) The Leucocyte, Alumni organ of Detroit College of Medicine, November, '07.

*Antigen—Any substance used as an injection.

By the investigation of the cases reported above it was demonstrated that amboceptor is produced very early after the beginning of typhoid infection and persists in increased amounts as the case proceeds to a favorable termination, and this opens the field for further inquiry. From the amount of amboceptor present cannot the prognosis of the disease be ascertained?

The methods of obtaining the various components necessary to carry out the test, as concisely as can be stated, are these:

Serum.

Into a sterile simplex syringe, i. e., that variety used by dispensers of biological products as containers for anti-toxin, etc., are drawn two or three cubic centimeters of a sterilized anti-coagulating fluid. The one generally used for the purpose has been a 1% sodium citrate in .85% sodium chloride solution. The area over the median basilic or cephalic vein of either elbow of the patient whose serum is to be tested is rendered aseptic after the usual methods, the vein entered with the needle of the syringe, and an amount of blood equal to the volume of the anti-coagulant withdrawn by slowly drawing on the piston. The mixture is shaken and stood away to settle. After from six to eight hours the corpuscles are found to have settled upon the piston-head, while above them is a supernatant clear straw colored fluid which is approximately $\frac{1}{2}$ serum. Or undiluted serum may be obtained from the blister formed beneath a very small cantharides plaster. Or the serum may be obtained after the ordinary method of securing it for a Widal reaction; i. e., by pricking the patient's finger and receiving the blood in a capillary tube where subsequent clotting expresses all the serum necessary.

Hemolytic Serum.

A hemolytic serum is obtained by inoculating a guinea pig subcutaneously at about week intervals with a 5% suspension of human blood corpuscles in normal saline solution. About three injections usually produce an effective serum. The blood is now obtained from the pig by puncturing the heart with a needle attached to a simplex syringe containing anti-coagulant. The supernatant fluid remaining after the corpuscles have settled is carefully decanted and the complement contained in it destroyed by heating at 56°C for one-half hour. The fluid thus treated is then preserved from contamination by the addition of sufficient lysol solution to make a 4% solution.

Bacteria.

Twenty-four hour agar slant cultures of typhoid bacilli are washed off with physiological salt solution and by comparison with a neblometer made to contain about 250,000 bacilli per cc. This suspension is now preserved with lysol sufficient to produce a 4% solution.

Blood Cells.

Red corpuscles from a normal human being are now secured in a manner similar to that described for obtaining the serum from the typhoid patient. The supernatant fluid is forced out of the syringe by pushing the piston and more anti-coagulant sucked in to replace it. The corpuscles are thus washed repeatedly and are then diluted to make a 5% suspension and preserved with lysol.

The Test.

In applying the test, .2 cc. of serum from the patient with suspected typhoid is placed in a small test tube, and to it is added 1 cc. of the bacterial suspension. The tube is kept at body temperature for one-half hour. If the patient has

typhoid fever, typhoid amboceptor will be present, and the following combination will occur:

Complement+amboceptor+bacteria=solution.

After keeping the tube at 37°C for one-half hour to allow the above combination to occur if possible, .2 cc. of the inactivated hemolytic serum and 1 cc. of the 5% suspension of blood cells are added. The tube is again placed in the incubator, this time for two hours. Upon removal from the incubator, it is allowed to stand at room temperature or on the ice for from twelve to twenty-four hours longer.

If the patient from whom the serum was taken had typhoid fever, then amboceptors were present, and the combination of complement, amboceptor and bacteria occurred. This caused the using up of all the complement of the serum. After the addition of the inactivated hemolytic serum, and the blood corpuscles, there being no complement left to enter into the combination, hemolysis could not occur and the blood cells remained undissolved.

If on the other hand the patient did not have typhoid fever, the complement would still remain, there being no amboceptor to enter into combination with it and the bacteria. It would hence be free to act when the inactive hemolytic serum and blood corpuscles were added and the following reaction would occur. Complement + hemolytic amboceptor + blood cells=Hemolysis. This is indicated by the presence in the tube of a wine red transparent fluid.

A positive reaction then consists in the finding of the blood undissolved at the conclusion of the manipulation; a negative by a "laking" of the corpuscles, i. e., the production of a wine red transparent fluid.

The simplification of the process which makes application of the test simple, is as follows:

The necessary biologic products can be prepared at the laboratories of the large drug firms and supplied in two bottles to the physician.

Bottle No. 1 should contain a suspension of typhoid bacilli of definite density (in our experiments 250,000 per cc. was found proper), preserved with lysol, and labeled "add 1 cc. to two drops of suspected serum and incubate for one-half hour."

Bottle No. 2 should contain inactivated hemolytic serum (serum in which complement has been destroyed) and 5% solution of erythrocytes in the proportion of .4 cc. hemolytic serum to each 1 cc. of erythrocyte solution. Lysol should also be used as preservative. Directions should read "Add 1.5 cc. of this solution to contents of tube which has just been incubated one-half hour, incubate two hours, and then keep at room temperature for twelve hours."

The solutions thus prepared will keep a long time without deterioration.

The application is now a simple matter. Two drops of suspected serum is added to 1 cc. from Bottle No. 1, and incubated one-half hour. 1.5 cc. from Bottle No. 2 are now added to above, incubate two hours, and then allow to stand twelve.

At the end of fifteen hours the result is known. No microscope nor technical laboratory knowledge is needed. The test is a macroscopic one.

The reaction is specific and by having other "No. 1 bottles" containing respectively dead cultures of the pneumococcus, meningococcus, tubercle bacillus, etc., the test can be employed to diagnose these conditions also.

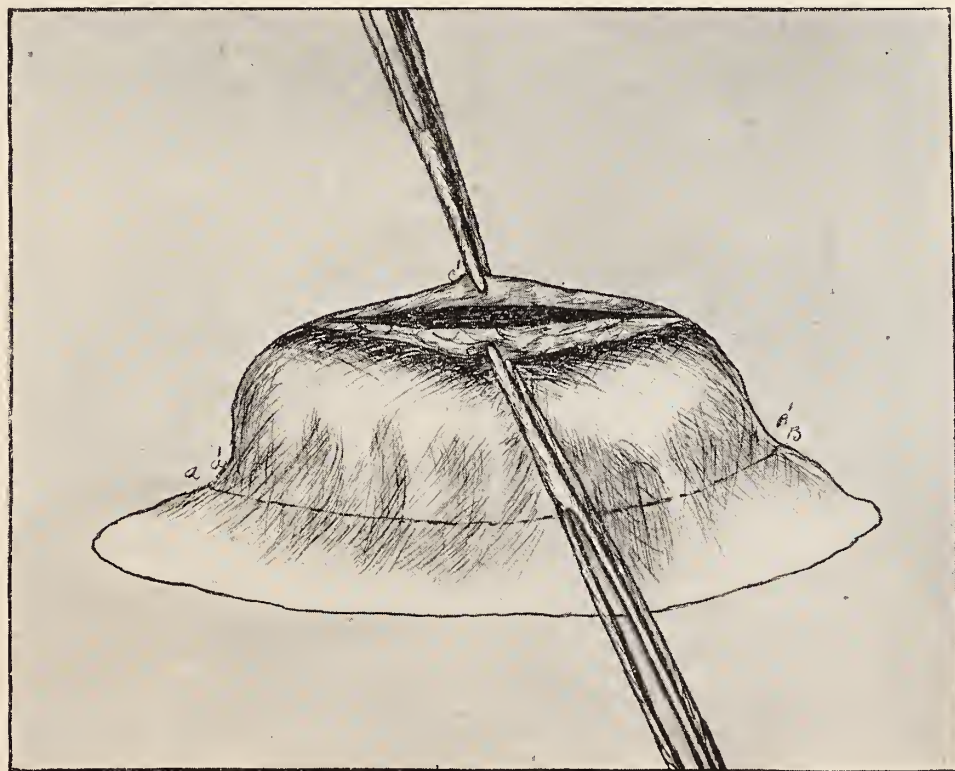
REPORT OF AN INTERESTING CASE OF UMBILICAL HERNIA.

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The technique with slight modifications is the same as given by William J. Mayo, *Journal A. M. A.*, June 1, 1907.

Mrs. A., age 59, had suffered for fifteen years with a large umbilical hernia. About one year prior to her operation she accidentally swallowed a needle.

On June 8th I operated, using the following technique: The skin was caught and lifted up with two hemostats, as shown in Figure 1, and a transverse incision made through all the tissues down to the normal sac, which was next opened. Lying on the right side was



1

Her bowels were constipated, tongue badly coated, and she had developed a marked degree of auto-intoxication. For six months prior to the operation she had suffered severely from an attack of acute melancholy.

the appendix which was removed. The needle which she had swallowed had worked its way through the wall of the ileum and lay embedded in the serous coat of the intestine and omentum. It was caught with a hemostat and easily

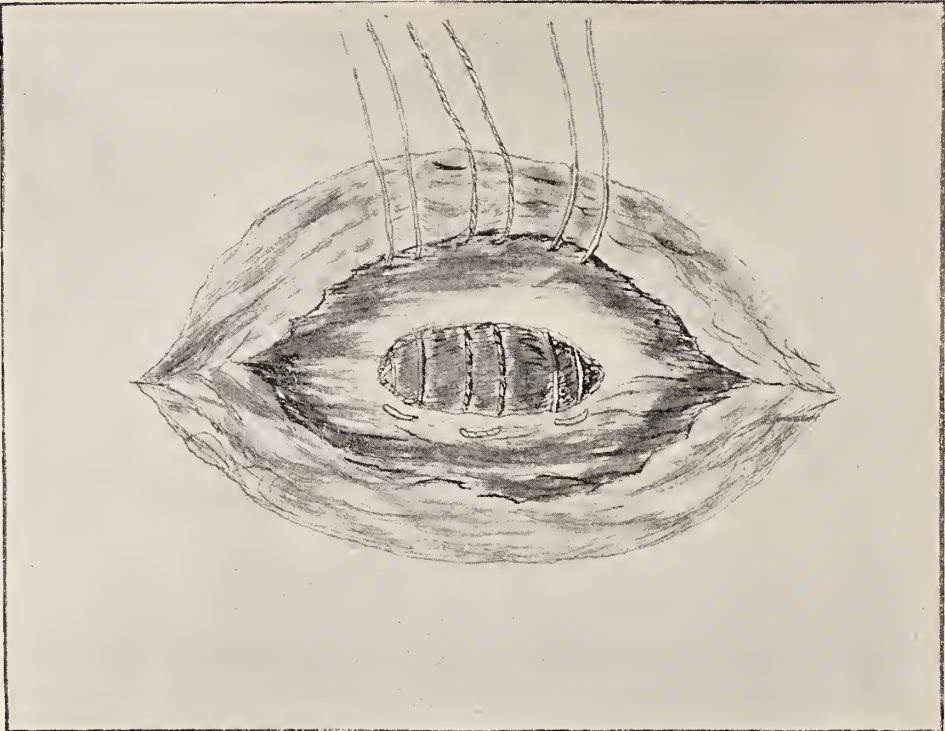


FIG. 2

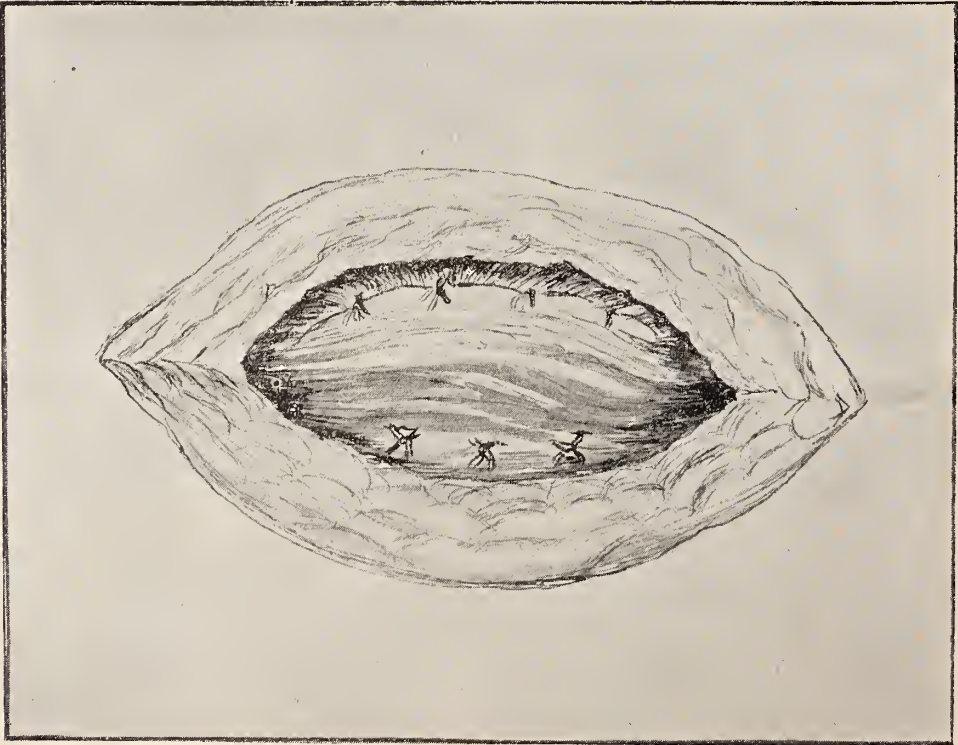


FIG. 3

removed. In many cases of umbilical hernia the anterior abdominal wall has become so stretched that the slack is considerable. In order to take up the proper amount of slack the right hand is placed below and the left hand above, the two being brought together will give a good idea of the amount of slack tissue to be removed. This is done by two transverse elliptical incisions, *abc* and *a'b'c'*. The sack with all of the adherent omentum is cut away. A curved needle carrying a kangaroo tendon is passed from without in through the aponeurotic structures and peritoneum from two to three inches above the margin of the opening. The needle and kangaroo tendon are drawn down and out of the hernial opening. A mattress stitch is caught in the upper edge of the

lower flap about one-third of an inch from the margin, the needle is returned back through the hernial opening into the peritoneal cavity and made to emerge one-half inch lateral to the point of original entrance. A sufficient number of the sutures are introduced.

The sutures are drawn tight, pulling the entire thickness of the aponeurotic and peritoneal structures behind the upper flap. The upper flap is now re-traced and if any gap exists it is closed with cat-gut sutures. The upper flap is now sutured to the aponeurosis below by continuous chromicized cat-gut sutures, and the superficial flap and skin closed in the usual manner. This patient made a perfect recovery, gaining many pounds in weight and her mental condition is as perfect as ever.

MOVABLE KIDNEY*

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In the early history of post-mortem work we have been told that there have been many instances where the kidney was found out of its normal position. The greater number of these cases in adult life were found in the female. A small ratio was found in children, and a few cases were found where the displacement was congenital. Anomalies of the kidneys are frequent and consist of number, form and size.

It is but a few years since a prominent English medical professor in lecturing to his class, said: "Gentlemen, I am about to speak to you of an organ which has no domain in surgery." This statement is a fallacy. Today we know the physiological function, the working

and the pathological conditions of this organ, and do not hesitate to perform any indicated operation upon it. I remember, in my early surgical career, when I anchored a kidney in proper position that I was censured for so doing by a surgeon of some years experience. The patient was suffering from a number of reflex irritations caused by the misplaced kidney.

Movable kidney is an acquired condition, and is always behind the peritoneum. The abnormal position of the kidney is designated movable when it leaves its normal bed when the patient is up and about, exercising or going through any severe exertion, or where it can be manipulated from its normal location, and where it is likely to regain its normal position when the patient lies

*Read before Michigan Surgical and Pathological Society, December 3, 1907.

upon his back, or when from external manipulation it can be replaced.

Floating kidney is a congenital condition. It lies within the peritoneal cavity. It is found much farther removed from its original site than the movable kidney; it can be manipulated much more easily, and causes many more reflex symptoms than does the movable. The floating or wandering kidney may be found in any part of the abdominal cavity, and has frequently been found in the pelvic cavity.

Movable kidneys may be designated displaced, ptosis, dislocated, fallen or dropped. They are found more often upon the right side than upon the left. Where there is congenital fusion of the kidneys there is apt to be a displacement, and if surgical interference is thought of, we must be sure that there is a second kidney. If we do not make sure, we may leave the patient without a kidney. An instance has been known where this took place. Polk recites a case in the *New York Medical Journal*, 1883, vol. 37, page 171. The patient lived some days after the operation. Fused kidneys are also known as horse-shoe kidneys.

Under etiology are usually mentioned pregnancy, child bearing, accidents, and direct and indirect trauma. Indirect trauma may result from vomiting, severe attacks of coughing, flatulence with marked gastric disturbances, and we may have movable kidney from a rapid loss of flesh. Direct trauma may result from severe attacks of vomiting where the diaphragm is forced directly against the kidney, a quick or sudden physical movement with a direct force against the region of kidney and from falling or being thrown from a height.

Symptoms are lassitude, backache, dragging sensations in back, thigh and leg, gastric disturbances, constipation, diarrhea, pain radiating to different parts of the abdomen down groin upon side

of kidney affected, and down leg and around hip joint. In children this might lead you to suspect coxalgia and urinary disturbances.

Diagnosis.—One should remember that the kidney is not a fixed organ, but is moved by the respiratory act following the diaphragm, and one point in diagnosis is when we are able to hold the kidney from following the diaphragm during expiration. The physical examination should be thorough. There are several methods. When the patient is standing, double palpation, one hand placed firmly against the back just outside of the erector spinæ, the other hand manipulating abdomen in front, allowing it to follow the abdominal movements of inspiration and expiration, so as to know when the outline of kidney is felt how far it leaves its normal bed. The "dipping" process may be used here but it is not as effective as when patient is in the knee and hand position. If patient has a large, thick, pendulous abdomen, sometimes it is a good plan to place him upon knees and hands with the examiner's hands in same position as above, then with the "dipping," one can easily bring kidney forward against abdomen and readily make out its outline. In above position inspection with pressure below the twelfth rib will give you a lax condition of muscles upon side of kidney displaced. Upon opposite side where kidney is in correct position, the muscles will be more tense. This condition is easily seen and felt. Pressing upon the outer edge of the lumbar muscles one can feel that the kidney has left its bed, and with the eye can see that there is a marked depression.

In all examinations of malposition of kidney where the diagnosis kidney displacement is made, there is never likely to be an error. Errors are made only when we have tumors about the site of kidney. These may be mistaken for kidney, but kidney is never mistaken for

tumor. There may be one condition in which we should use a little caution. That is, the so-called corset liver. One method of examination is to place patient upon the back and manipulate the same as we did in the other two methods. Another is, place patient upon the side upon which affected kidney lies, with the legs flexed upon the thighs and the thighs upon the abdomen with trunk dropped forward. In this position the one hand at the back will press the kidney well forward, and it can be manipulated with the other hand quite readily.

Prognosis.—Fairly good, but depends upon correct treatment.

Treatment.—If there is any constitutional diathesis, it should be corrected. If there is emaciation, normal nutrition should be established. If the patient has a large pendulous abdomen, this should be corrected by diet, exercise and abdominal or other appliances. A pad may be worn to keep the kidney in place and to give patient relief. If all of these fail, then nephropexy or nephrorrhaphy should be resorted to. This operation was brought forward and practiced by Dr. E. Hahn, in 1887, and consists in making an incision in the lumbar region at the outer margin of the spinal muscles down to the kidney. The fibrous

capsule, with a bite of the cortical substance, should be stitched to the fascia of the back and to the portion of the periosteum that has been stripped from the twelfth rib with No. 3 chromicized 20-day catgut, 3 or 4 sutures being used. Tuffier takes up a flap of the fibrous capsule and stitches the same to the divided muscles. Others scarify the capsule of kidney and stitch the kidney to the fascia of muscles of the back. Any of these methods is applicable. The external wound is sutured the same as other such wounds, with drainage of silkworm placed in lower angle of incision. This drainage should be removed the second or third day. The wound should be dressed with an abundance of sterilized gauze. A pad should be applied in front to keep the organ in place when the patient is moving, vomiting or struggling. The patient is placed upon the back for ten or twelve days. A bandage pad is applied in front and below the kidney to keep it in place, and kept on for several weeks after patient has been up and about. This surgical procedure is comparatively safe, statistics showing that about 1 to 1½% are fatal. It is an operation that should be advised and practiced, as it gives the only rational relief in cases that have a number of very aggravating reflex disturbances.

The physician must be a book lover. Every book in his library has a history. Although it may be out of date, yet the owner remembers some good ideas that it gave him, and cherishes it. How it does hurt to hear the thud of a good book as it falls to the floor, or to see one spread face downward on a table, or to see a reader wetting his finger-tip in his mouth to turn the leaves!

The following from "*Modern Bookbinding*" is well worth reading:

"Hold the book with its back on a smooth or covered table; let the front board down, then the other, holding the leaves in one hand while you open a few leaves at the back; then a few at the front, and so on, alternately opening back and front, gently pressing open the sections

till you reach the center of the volume. Do this two or three times and you will obtain the best results. Open the volume violently or carelessly in any one place and you will likely break the back and cause a start in the leaves. Never force the back of the book.

"A connoisseur many years ago, an excellent customer of mine, who thought he knew perfectly how to handle books, came into my office when I had an expensive binding just brought from the bindery ready to be sent home; he, before my eyes, took hold of the volume, and tightly holding the leaves in each hand, instead of allowing them free play, violently opened it in the center and exclaimed: 'How beautifully your bindings open!' I almost fainted. He had broken the back of the volume and it had to be rebound."

MEDICAL FALLACIES.*

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Kalamazoo.

"No pleasure is more incomparable than to stand on the vantage ground of truth."—Bacon.

"It is a source of delight to be safe on the shore and view ships tossed at sea, or to be in a fortification and see two armies join battle upon a plain. But it is a pleasure incomparable for the mind to be seated by learning in the tower of truth and from thence to view the errors and labors of others."—Lucretius.

In the ordinary conduct of life, in the ordinary business of mankind, wrong inferences, incorrect interpretations of experience are absolutely inevitable; and after the highest degree of culture obtainable, in and out of our profession, such erroneous inferences are quite as frequent as correct inferences, correct interpretations of experience.

In the department of inquiry or in departments devoted to experimental or investigative work pertaining to medicine and allied sciences, the diversity of opinions still prevalent among talented persons and the equal confidence with which some of these people cling to their respective tenets are a proof that even the most cultivated patron of our profession has not as yet learned to abstain from drawing conclusions for which evidence is insufficient.

Notwithstanding the training and natural capabilities of our illustrious predecessors and colleagues, there is reason for the diversity of opinion, the prevalence of superstition, fallacies and quacks in our midst.

Of all things that nature has created, the human body is most capable of re-

lief, though the method of relief be most liable to error. Of all the natural bodies we find none so variously compounded as the human. Vegetables are nourished by earth and water, and brutes by herbs and fruit; but man feeds upon the flesh of living creatures, herbs, grain, fruits, different juices and liquors, of which the latter have been his curse. His habitations, his exercises, his passions undergo numberless changes so that it is evident that the body of man is more technically compounded and organized than any other natural substance. This variable, subtle composition and fabric of the human body makes it like a kind of curious musical instrument easily disordered; and therefore the poets justly joined music and medicine in Apollo, because the office of medicine is to tune the curious organ of the human body and reduce it to harmony.

The subject being so variable has rendered the art more conjectural and left the more room for imposture. Other arts and sciences are judged by their power and ability and not by success of events. The lawyer is judged by his ability of pleading, not by the issue of the cause; the pilot by directing his course and not by the fortune of the voyage: while the physician to some degree has no particular art that clearly demonstrates his ability but is principally censured by the result, which is very unjust. For who can tell, in great many instances, if a patient die whether it is inevitable, or if he recover whether the cure is brought about by art or accident? Whence imposture is frequently

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extolled and virtue decried. The weakness and credulity of men are such that they often prefer a quack or a cunning woman to a learned physician.

Thus we see how this frail fabric of flesh of ours could have been the cause for medicine to have had its birth in magic and superstition, just as alchemy gave birth to chemistry and astrology to astronomy. Its first professors were sorcerers and priests. Its beginnings are to be looked for in juggleries and mummeries of holy men and women who by fasting or narcotics or other means, were enabled to hold communion with benignant and malevolent spirits. Among rude peoples the physician is often a priest but always a magician. In this modern enlightened age as well as in the ancient period, prayer, charms, medals, rings, etc., impregnated with virtue by ecclesiastical benediction, and electric belts are supposed to be indispensable to purge the human body of its demoniacal possession, disease. These heresies which emigrated from Europe to this country are flourishing today in one particular locality—Georgia and South Carolina—alongside of the best equipped of our profession. The people particularly ordained to use charms and incantations are called "users."

People in general are prone to marvel at the success of such superstitions, and are unable to consider the inaccuracies, the fallacies and errors accompanying such absurd remedies for diseased processes. I have attempted a classification to facilitate clearness:

I.—1. Superstitions—pure and simple—indefinite origin.

(a) Incantations:

1. Cure for inflammation—"St. John came over with all his congregation, St. Mary came over with all her communication, Christ is mighty to cure mortification, and all other

complaints. In the name of the Father, in the name of the Son, in the name of the Holy Ghost. Amen,

2. For Colic—"Lay your hand on the person's stomach and say three times, I stand on wood and I see wood. For one glass full of cold red wine, Colic let the griping alone. A, B, C May God help you. In the name of God the Father; in the name of God the Son; in the name of God the Holy Ghost. Amen, amen, amen."

3. For Boil (furuncle)—"The boil and the Dragon went over the creek. The Dragon drank, the Boil sank. In the name of the Father, in the name of the Son, in the name of the Holy Ghost, amen." Lay your hand upon the boil as you say these words. Do it three times and the boil will decrease.

(b) Superstitious Remedies:

1. Rattlesnake oil for rheumatism.

2. Grease fried from toads for rheumatism.

3. A sharp knife taken to bed to cut the pains in after birth, or a razor to cut pains in rheumatism.

4. Remedies for Epilepsy:

1. Tea made from a piece of rope with which some one has been hung.

2. Take a broom and sweep from three corners of the room and throw the sweepings over the person who has the sickness while you say, "In God's name, Falling Sickness, you must depart till these seeds die out." So do it three times.

II.—Superstitions of definite origin—

Substances having some marvelous property or origin; also had some marvelous property to heal.

1. The alchemists expended labor and

ingenuity ad libitum, to make gold potable. Motive actuating—a conceit that gold, being so precious materially must have marvellous properties as a universal medicine.

2. Any substance involved in mystery or believed to be derived from supernatural source had also medicinal properties. At one time showers of a peculiar substance fell in northern Italy which is now known to be excrements of insects. The inhabitants regarded it as a manna and swallowed it with such avidity that little enough was left for scientific experiment. The factor underlying this is, that a wonderful thing of course has wonderful properties.

3. There is a belief that every natural substance which possesses any medicinal virtue, indicates by an obvious and well marked external character the disease for which it is a remedy or for which it is employed. This outward character was generally some feature of resemblance, real or fantastical, either to the effect it was supposed to produce or the phenomenon over which its power was thought to be exercised. Thus the lungs of a fox must be a specific in asthma since that animal is remarkable for strong powers of respiration.

4. "Tumeric and saffron have a brilliant yellow color which indicates that it has the power of curing jaundice."

5. The polished surface and stone hardness which is so imminently characteristic of the seeds of the *Lithospermum officinale* (common gromwell) were deemed a certain indication for use in calculus diseases.

4. Nettle tea for urticaria.

Sage tea for colds.

Lime water for warts.

Porous plasters to relieve pain in back.

Electric belts.

Dyes of stockings—poisonous.

In the sixteenth and seventeenth centuries when medicine began to assume the character of an inductive science, these evils, these sects and impostures, were rightly speaking, competitors of the more learned men of medicine. By reasoning, characteristic of those periods physicians would say in the words of Solomon: "If it befall to me as befall to fools, why should I labor to be more wise?" Hence, we find then, poets, antiquaries, critics, politicians and divines among physicians, and in each particular subject they knew more than in medicine. They knew and realized that individual interest, time, labor, and study failed to merit them reputation or profit.

Impostors, quacks, etc., have vied for popularity, with physicians, because the *people have failed to observe the instances and circumstances surrounding the nefarious results of these sects*. They have called fortune-tellers true prophets by not referring to their numerous events in which their predictions have been falsified, but by considering only the accidental successes. They have not considered the possibility of the person being in collusion with some friend. The mass of mankind has seemed to remember only the affirmative side of the question and absent-mindedly neglected the negative upon which, had there been some thought, quacks, nostrums, superstitions and magic would not have been known today.

Coleridge, in his essays entitled "Friend," has happily illustrated the subject we are now considering. In discussing the origin of a proverb which is to be found in all the languages of Europe, "Fortune favors fools," he admits several explanations. Providence is eminently watchful over the helpless and extends special care to those incapable of taking care of themselves. So used, it breathes the same feeling as, "God tempers the wind to the shorn lamb," or

as the sportive adage says "the fairies take care of children and tipsy folk."

Unforeseen coincidences may have greatly helped a talented and capable man to accomplish what his own abilities were able to do for him; in such instances the good work excites little or no attention and the incident is not remembered. But let an ignorant man perform some remarkable piece of work without the aid and intervention of skill and we marvel at it, attention is aroused, a fixed impression made and the incident is long remembered. We attribute the recent phenomenal development of opsonins and their application to the treatment of disease to the cleverness, skill, talent, and enthusiastic application of Prof. Wright, and not to accident. It is not more than expected from a talented man. Let a poor mechanic accidentally develop a machine which revolutionizes a department in mechanics and grow wealthy in consequence, his jealous neighbors would say, "O what a lucky fellow! Well fortune does favor fools—that's certain—it's always so." Thus accumulating one sort of facts and never collecting the other we do as poets in their diction and quacks of all denominations do in their reasoning—put a part for the whole and at once soothe our envy and gratify our love for the marvelous, by the sweeping proverb "Fortune favors fools."

Another class of fallacies originating from past experiences are those arising from preconceived opinion. This has made the whole race unobservant of all facts, however abundant, even when they pass under their own eyes, which are contradictory to any first appearance or any received tenet.

(a) Use of ice on back of neck for nose-bleed—the factor is the production of shock, though mild, which decreases the blood pressure sufficient to stop the nose-bleed.

(b) Colds—Rely wholly on medicines. Time alone can do more than drugs. An individual asked Dr. Osler for a prescription for a cold. His answer was: "I give you just four days."

The celebrated John Wesley, while commemorating the triumph of sulphur and supplication over his bodily infirmity forgets to appreciate the resuscitating influence of four months' rest from his apostolic labors. The disposition of the human mind is such as to place confidence in the operation of mysterious agents that we find him more disposed to attribute his cure to a brown plaster of egg and brimstone than to Dr. Fothergill's prescription of "rest, fresh air, goat's milk and exercise."

Preconceived ideas not only affect the public mind, but we find it in our midst, where it has root in every-day work and thought. Empiricism originated from the word empiric, meaning experimentalist, searcher after truth, or facts in nature. It is unknown during just what period it began to degenerate in meaning. Empirics were a sect during the time of Celsus and Galen who gave some insight into their modes of thought and practice. The later adherents of the school excluded all theoretical study even that of anatomy and were guided by tradition and individual experience. Empiricism in medicine today means that for want of theoretical or experimental knowledge, remedies are prescribed by guess according to name of disease without taking into consideration the constitution or individuality of the patient. He frequently seems to have no anatomical, pathological, or physiological idea of the disease about to be treated but forms a picture in general of the diseased state and proceeds to treat it by a shotgun prescription recommended for a similar picture, some one of the numerous drugs therein possibly acting directly, instead of applying some known therapeutic principle based upon

such an anatomical pathological entity. Frequently we fail to consider conscientiously the great variety of pathological processes directly influencing any one particular process. These become more numerous as our viewpoint becomes more comprehensive. Hence, I believe, that empiricism as it was originally construed, is permissible, but that as it is at present construed, it has no application. I can say in passing that though we may be far from empiricism in our method of treating disease, it certainly borders on a fallacious method. We enter into the minutiae of detail to observe, examine and discover every relation of diseased processes. Then we stumble, fumble, guess, and blunder about among all sorts of therapeutic anomalies presented to us by reputable and disreputable pharmaceutical manufacturers, whose representatives philosophize, ad libitum, upon the magnificent healing properties of their products. We endeavor to make the disease apply to the preparation rather than making the prescription apply to the disease. This is generally done whenever we attempt to fill a prescription by some of these stock preparations peddled at our doors. For example: We have no less than 25 different formulas for diarrhea. Each individual may purchase any two of these formulas. Now diarrhea may be due to the presence of pathogenic bacteria; to decrease of hydrochloric acid; retention of putrefactive products; to constipation; to disturbance in innervation of intestinal tract; to amoeba dysentery; to relaxation of blood vessel walls of the intestinal tract. Now if an individual depends upon two or more different formulae, what does scientific medicine do for him? These preparations contain from 2 to 5 grains of bismuth. In order that good results be obtained from bismuth, 15 to 30 grains must be administered,

Bronchitis may be due to emphysema, pleurisy, cardiac or nephritic incompen-sation, intercostal neuralgia, asthmatic tendency, tuberculosis, pressure of tumors of the mediastinum, infection of some cocci or other pathogenic bacteria; yet, for these, we keep upon our shelves, White Pine Tar Compound, with or without morphine. What effect does prescribing patent and semi-proprietary compounds have upon the individual? It breeds careless methods of thought and action, stifles studiousness and research, counteracts agitation against patent medicine evil, and reacts against the profession as a whole.

There is no branch of scientific medicine in which there is likely to be found error as in scientific nomenclature. A great many expressions, at one time limited by the extent of medical knowledge have, during recent years undergone modification in order to convey any idea at all.

Our view of medical thought has been greatly changed, differently moulded, and most certainly broadened. Congestion of the liver, during a period in the past conveyed quite a complete idea and a definite condition. We see it to-day occasionally. It means little now unless modified. If one says passive, or active, or functional or inflammatory congestion of the liver, we know definitely what is the trouble. The ancient expression congestion of the lungs means little to us today. It merely expresses one condition through which the lung passes during an attack of lobar pneumonia. The word pneumonia is quite permissible, but unless the word is modified we may assume to know and yet not be positive of the condition. Thus lobar or lobular pneumonia, or interstitial or apical or alcoholic or fibrous pneumonia have distinct entities.

We hear frequently, "He has some constitutional disease." That may be a correct statement in some one instance,

but in the majority of such expressions it bears an erroneous meaning. There is room for conjecture. Some authorities include under this head diseases of blood, osteomalacia, rachitis, diabetes mellitus and insipidus, chronic rheumatism, arthritis deformans, etc. You readily see that constitutional diseases may designate quite a variety of conditions. It seems to me from the original meaning of the word one should confine the class of diseases to those which arise from some constitutional anomaly which affects the body as a whole. Diabetes mellitus is not a constitutional disease, because its presence is significant of some pathological condition of the pancreas or some extrinsic influence affecting the body which itself produces diabetes. Obesity is an example of a constitutional disease because its origin can not be traced to any local conditions or disease and which affects the body as a whole.

We hear many intelligent people speak of after-birth for placenta; piles (hemorrhoids); quinsy (suppurative tonsilitis); boils (furuncle); and "matter" to signify pus. If people can learn the technicalities of art, lengthy names of history, biography and the bible, they can also learn readily, at our hands, some of the most simple names that designate the true condition. We have taught the public about hygiene, sanitation, pure food and patent medicines, and social evils. The subject, "Fallacies," has a minor place, but it is important and necessary to dwell at length upon the little things. In short, there is no fact or truth too small for consideration in medicine. The surgeon emphasizes the minutest detail in asepsis as indis-

pensable to good results. A minute error might mean contamination, infection, possibly an accidental death. "The best man," said Socrates, "is he who tries to perfect himself, and the happiest man is he who most feels that he is perfecting himself."

Individual perfection in the principles of scientific medical thought, practice based upon facts, action controlled by love and high appreciation of truth—all these factors predominate in the present day work, and are rapidly eliminating the belief in superstition, quacks, and imposters. Enlightened civilization and educational training and the steady progress of the allied sciences are rapidly eliminating the factor of "guess" in the ordinary daily routine of life.

There is little doubt but that we are creatures of circumstance. Many a cure is established, many a life is saved, partly by the intervention of science and partly by Nature's sleight-o'-hand performance, but we can truly say that we are watching Nature more closely and interpreting Nature more clearly and copying Nature more accurately than ever before. We seldom injure her as the ancients did. We never fail to assist her, but labor incessantly to see that we never handicap her in any of her wonderful processes. When this principle can be followed through elimination of individual inaccuracies by a process of clear thinking and right doing, when the individual will concentrate himself, at all times, to seek the truth and continue as an unswerving adherent of the truth, and as an uncompromising enemy of fallacy and sophistry, then, and not till then, will we have reached our millenium as an ideal profession.

A PLEA FOR MORE FREQUENT CURETTAGE FOLLOWING LABOR*

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A few words, gentlemen, upon the neglected subject of the heat mechanism in relation to temperature, puerperal sepsis, and the value of early curettage. It is frequently difficult after labor, when a patient presents normal symptoms with the exception of a moderate fever, suspicious lochia, and perhaps a slight amount of uterine tenderness, to decide whether to curette her. Very often the tendency is to delay day after day, using cathartics, antipyretics, quinine, etc., hoping that the fever will subside.

This paper is written in an attempt, (by pointing out the errors of the heat mechanism) to aid in an early decision, between a thorough cleansing of the birth canal or to pursue the too frequently used expectant method. I mean by errors of the heat mechanism, a lack of the usual relation or reaction between the temperature and the degree or variety of infection, or other pathological condition.

A short digression in review of the heat mechanism will be necessary to show the complexity of this coördinate mechanism and to make my paper intelligible. The heat mechanism according to Reichert, who has done considerable original work on this subject, consists in a general way of the following:—

- (a) A nervous mechanism which controls the thermogenic apparatus:
- (b) A thermogenic mechanism, or the process by which heat is made:

(c) A thermolytic mechanism, or the process by which heat is given off from the body:

(d) A thermotaxic mechanism, or the regulation between the last two.

The nervous mechanism is made up of centres, afferent and efferent nerve fibers. Specific centres control the amount of heat produced by skeletal muscles. The centres which are in the cord are reflex and automatic, reflex because they are supposed to be governed by afferent impulses principally from the skin; automatic because they are thought to be able to work alone. Thermo-accelerator centres are found, one in the caudate nucleus of the corpora striata and one in the pons. A thermoinhibitory centre is found in the brain cortex of man, in the dog, in the sulcus cruciatus and at the junction of the supra- and post-Sylvian fissures. Ordinarily the general centres regulate the amount of heat produced; in extraordinary conditions the accelerator and inhibitory centres are brought into use. The activity of these centres is governed chiefly by the temperature of the blood and by cutaneous impulses generated in heat and cold nerves.

The thermogenic mechanism consists of the incidental heat-producing tissues, viz., all of the bodily tissues; the specific heat-producing tissues, viz., the skeletal muscles; and its (the thermogenic) nervous mechanism. The thermolytic apparatus consists of the sweat mechanism, respiratory movements, mechanism of circulation of the blood, and the pilo-motor mechanism, which brings about changes in the tension of the skin. All of these thermolytic mechanisms represent methods of giv-

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ing off the excess of bodily heat.

The thermotaxic mechanism is the regulation between thermogenesis and thermolysis.

Too much importance is attached to the idea that a moderate fever means a mild infection. We have all seen cases lost from an adherence to this view, in the first few days of a puerperal infection. There is nothing in our knowledge of the heat mechanism to prove that this is the case, or that this mechanism in different individuals will react in the same degree by the same amounts of poison.

The following examples of errors of the heat mechanism will illustrate the fact, that the degree of fever is not necessarily in relation to the gravity of the case:—The easily disturbed temperature of childhood and of hysterical patients; a rise of temperature due to emotion from fear of an operation; exposure to cold; constipation in pregnancy; mammary congestion without pus; considerable fever following the expulsion of a tape-worm; perforation of the uterus (when the rise of temperature occurs immediately it is said to be more reflex than infective); and a high fever occasionally occurring from acute retro-displacement of the puerperal uterus. (Hirst.)

The heat centres can also be affected by vasomotor and blood-pressure changes; differences in composition of the blood plasma, other than that due to organisms; a thermogenic toxin (mentioned by Hirst), local or general metabolic changes, and many other conditions.

These examples will serve to elucidate the fact that the bodily temperature is controlled by a complex nervous mech-

anism and that it is often affected by many conditions besides microorganisms, ptomaines, and the like. That this mechanism can act in such a way as to disguise a severe infection can hardly be doubted, when we realize that it is a powerful reflex apparatus, constantly tending, by influencing metabolism and the actual heat produced by the skeletal muscles, to keep the temperature normal, in spite of internal and external conditions. We are too prone to confuse the heat mechanism with the clinical thermometer, and to consider it as infallible and based upon an absolute and universal calibration.

While acting as consultant to the outpatient obstetrical department of the University of Pennsylvania, I had ample opportunity of testing the following mode of procedure; if the patient presented for three days, in spite of the expectant method of treatment, a moderately high fever slight uterine tenderness and a lochia of questionable character, the usual course of treatment was to curette, of course being guided by any other symptoms or conditions, and laying especial stress upon the condition of the uterus. This method gave good results in a large number of cases, particularly with the dispensary class of patients.

According to Webster and the figures of Boxall, Cullingsworth, Williams, etc., there has been very little diminution in the death rate from puerperal sepsis, except in hospital practice, since the advent of the aseptic era. Therefore, one would be justified in reasoning that besides too little attention being paid to aseptic technic, the after-treatment of many child-bed cases could be much improved.

THE PROSTATE GLAND*

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The prostate gland is a firm muscular glandular body, placed like a sphincter around the first inch of the urethra, immediately in front of the neck of the bladder and rests upon the rectum, through which it may be distinctly felt. In shape and size it resembles a chestnut—and weighs about five drachms. It consists of two lateral and one middle lobe. The two lateral lobes are of equal size, separated by a deep notch behind and a slight furrow upon the anterior and posterior surfaces. The middle lobe, usually a troublesome one, is a small transverse band placed between the two lateral lobes at the posterior part of the gland and lies beneath the neck of the bladder behind the commencement of the urethra and above and between the ejaculatory ducts.

The prostate is perforated by the urethra and ejaculatory ducts; the former usually lies about one-third nearer the posterior than its anterior surface. The ejaculatory ducts pass forward obliquely between the middle and each lateral lobe and open into the prostatic portion of the urethra. In its histological structure it resembles the uterus in the female and is composed of muscular fibres, glandular elements, and a connective tissue stroma uniting them.

The function of the prostate is to contribute a fluid to the semen. The prostatic fluid is viscid, opalescent, and usually alkaline, and contains 1.5% of solids; this secretion, together with the albuminous secretion from the seminal vesicles enables the fluid to clot after its reception in the female passages and

thus prevent loss of spermatazoa. It has been demonstrated that this coagulation is caused by a specific ferment present in the prostatic fluid. By careful experiment it has also been demonstrated by Steinach that removal of the prostate and seminal vesicles does not diminish sexual passion or ability to perform the sexual act, including the actual discharge of spermatozoa; it does prevent entirely the fertilization of the ova. Removal of the seminal vesicles alone markedly weakens the fertilizing power of the semen. Hence the removal of the senile hypertrophied prostate does not carry with it the loss of any important function. Hypertrophy of the prostate exists in about 50% of men at 60 years of age and in probably 20% of these cases there are manifest symptoms. The cause of hypertrophy of the prostate, outside of those cases directly traceable to excessive sexual indulgence and gonorrheal infection, is unknown.

The pathological changes consist of general enlargement of the entire organ or the enlargement may be confined to one or both laterals or the middle lobe. The first change which occurs is a growth of the gland tubules, with their associate muscle, so as to form a new gland-substance closely resembling the normal prostatic substance. In this, the glandular stage of hypertrophy, small tumors often form in the substance of the prostate, causing an enlargement which is irregular and may impinge upon the urethra and cause it to become distorted. Later a degenerative change takes place, which finally converts the new tissue into a mass of more or less dense fibrous tissue and

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this constitutes the second or fibrous stage. After a period of degenerative changes the gland becomes very hard and dense. The extent of the hypertrophy depends upon the nature of the tissue involved. It may be only slightly enlarged or attain the size of a large orange or larger. Obstruction may come from the enlarged middle lobe only and assume the shape of a dam across the mouth of the bladder, behind which the urine accumulates and cannot flow out, or it may be more circumscribed, extend up into the bladder and act as a ball valve, the harder the straining to expel the urine the tighter the valve closes over the vesical orifice.

In many cases enlargement of the prostate does not cause any symptoms and is then harmless, but when we do get obstruction what is the result? Residual urine accumulates in the bladder, pathological changes occur in the bladder wall, and secondarily the ureters and kidneys become affected. The bladder becomes distended and its muscular wall thinned. As a result of this the ureteral valve is opened out, the ureters and pelvis of the kidneys dilated and pressure changes occur in the kidneys.

The changes in the urethra are, first, it becomes elongated two or three inches; second, the normal curve is changed; third, the lumen of the urethra, instead of round, becomes flattened, due to pressure of the lateral lobes and it becomes a vertical slit—hence the failure often encountered in passing an ordinary catheter. The symptoms are familiar to every practitioner of experience. First, there is difficulty in starting and deficiency in the flow of urine. Second, frequent desire to urinate, especially at night. Third, the well-marked symptoms of cystitis, occasioned by the decomposed residual urine, which becomes alkaline in reaction and ammoniacal in odor. Fourth, after the bladder has become distended to the limit, incontinence of urine develops and

we have constant dribbling.

Now the only question of treatment I care to consider in these brief notes is how long are we to allow these cases to drift after failing to secure anything like permanent relief from the old time palliative treatment?

The experience of the past five years has clearly demonstrated the efficacy of radical surgical procedure in these cases; the operation of prostatectomy has proven to be the most satisfactory in its results of all the methods advocated. Bottini's operation of burning a channel through the enlarged prostate has never been extensively accepted in the United States.

Prostatotomy is only successful where the middle lobe alone is the cause of the obstruction, which is rare, and the cutting out of the "V" shaped piece from the gland has not proven satisfactory. Castration has availed but little—except in early cases. Therefore, I am of the opinion that the radical operation is, as a general proposition, the most satisfactory.

Then as to the method, there are the suprapubic, perineal, or the combined operation. My personal experience has been somewhat limited, but I have found the perineal operation so easy and so satisfactory that I prefer that method, but some cases are of such a character as to require the suprapubic or the combined suprapubic and perineal operation. But whatever operation is done, it should be done early; get the patient in as good physical condition as possible, wash out the bladder freely for a few days prior to the operation, clear up any uremic infection as much as possible, and operate. If the patient is not too old and the kidney complication not too extensive—always considering, of course, the same general surgical propositions that you would in doing any surgical operation, you will be as pleased with the result as you are from almost any surgical procedure.

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APRIL

Editorial

The exposure of frauds by the *Journal of the American Medical Association* continues without abatement. The most recent instance concerns one of the most widely advertised drug manufacturers in the country—the ABBOTT ALKALOIDAL COMPANY. The development of this company's products has been so well managed as to result almost in a medical sect, and the organ of the sect is the *American Journal of Clinical Medicine*, formerly the *Alkaloidal Clinic*. It has long been apparent to discerning readers that this journal is but a compend of thinly veiled advertisements, but to thousands of doctors, who are ever searching for medical specifics, the specious claims of the ABBOTT COMPANY have made powerful appeal. It is to such men that the firm has directed its most insidious arguments, as is suggested by the list of minor journals containing Dr. Abbott's original articles. It is astonishing that physicians are so easily duped, and yet it may be urged that their eternal desire for new medicinal agents is prompted by an underlying good motive. It is a form of aberration, of unreasoning empiricism, which leads a man to chase this therapeutic will-o'-the-wisp, and it is a form of wool-blindness which causes him to give credence to any article appearing under the guise

of quasi-science and signed by a fecund author, such as Dr. Abbott. The great majority of his articles include a recommendation of his firm's products, and it is a mystery why such literary contributions have so long been accepted by medical journals, when they are such palpable advertisements. We suspect that many an editor may have been influenced by the full-page paid advertisement in his journal.

The humbuggery of "alkalometry" has been exposed in its relation to some of the Abbott drugs, such as cactin and calcidin, but the fraud is not so much in the specific instances as in the methods employed. The chief officers of this commercial house are men who practice little if any medicine actively; for years they have been devoted to commercial enterprises, and their interests include other ventures than drug manufacturing. Yet, sailing under the guise of ethical practitioners, they make a point of attending many medical gatherings, not hesitating to read papers, enter discussions, and on occasion introducing therapeutic suggestions.

But most flagrant of all is the stock and bond issue of this remarkable concern. Selling their notes in small lots to physicians throughout the country, they gain an assured patronage that speaks well for their financial sagacity. Dividends are guaranteed, although it seems the guaranty does not bear scrutiny. As a matter of fact the firm is said to be not on a perfectly secure financial basis, and the sale of their commercial paper is not for eleemosynary purposes, but to get money. The officers of the firm were also the chief executives of a bank, which recently failed, and thus their embarrassment came to public notice.

This, then, is the true standing of these men who profess to be philanthropic, ethical members of the medical fraternity;—they are owners and man-

agers of a drug firm; they are officers and promoters of other business concerns; they were officials of a bank in whose failure the ABBOTT COMPANY is a prominent factor; they appear in reputable medical societies and openly advertise themselves and their nostrums; they offer to physicians bonds which are not properly secured, and invite thereby the prostitution of a man's self-respect and professional honesty.



Who owns the prescription? This is a question which has been much discussed and which has been answered in as many different ways as is possible. Some have held that the doctor is the owner, others that the prescription is the property of the patient, others that it belongs to the druggist, and a few that it is public property.

The Louisiana State Board of Health has made a rule that the prescription is the property of the physician. This has been done with the hope of discouraging the constant refilling of prescriptions by the pharmacist. The argument set forth is that an original recipe is but a copy of instructions to the druggist, to aid the patient in getting the proper medicines, and that the druggist holds it in trust for the physician, therefore having no right to copy or refill without the physician's consent. While the object of the Louisiana Board is quite commendable, it is questionable if their action would be sustained by the court.

Those who hold that the patient is the rightful owner, have in some ways, the best of the argument. The courts have held that the word "prescribe," as applied to the acts of a physician, means "to advise, appoint or designate a remedy for disease." It then follows that a prescription is a matter of advice, and if there is any property in advice it cannot belong to the person who gives it.

The advice, whether oral or written, has been paid for by the patient (or more often has been charged) and he has the legal right to carry it out or neglect to do so, as seems fitting to him. If the advice is written, in the form of a prescription, the patient has the legal right to have it filled, give it to a friend, keep it as a souvenir, or tear it up. In other words, the physician has merely sold a copy of certain information and that copy belongs to the patient. From the legal point of view, it is probably not a part of the contract that the patient shall keep this advice solely for himself, though it would seem that, viewed from the ethical side, this is generally understood. We do not know that this point has been passed upon by the courts, but numerous almost identical questions have often been decided, as for example, stock quotations furnished a telegraph company, or financial advice given by Dunn or Bradstreet are common property, unless it is specifically stated to the contrary (as is usually the case) in the contract.

It would seem then that the physician cannot claim the prescription after it has been given to the patient. To whom does it belong after it has been filled by the druggist? Is the pharmacist merely the custodian or is the slip of paper his own property? The law in nearly every state provides that the druggist must keep the original prescription, if it contain poison, on file. It then becomes a piece of evidence and in that sense public property. There is a decision by the Court of Civil Appeals in Texas to the effect that a druggist has a property right in prescriptions. The court says that "there was testimony in this case tending to show that there was a qualified right to the use of the prescription in the person depositing it; but otherwise, and between the druggist and third persons, the druggist was entitled to it." In one case in Ohio, also, it was held

that the prescription files belonged to the druggist and did not form part of the general stock, and therefore, could not be held under the mortgage covering the stock in the shop.

Still the question has not been settled by any of the higher courts.



Another interesting question of ownership is that of the bedside chart. Does the record of the case belong to the doctor or the nurse? Suppose that Dr. A. is attending a patient ill with typhoid and during the trying third week, Dr. A. is discharged, and Dr. B. is called in. The nurse, who has kept the chart, is retained. The chart, in such a case, is most valuable and to be deprived of it a most serious handicap for Dr. B. Has Dr. A. the right to take away the chart when he is dismissed? This question was most seriously discussed in a recent journal and different opinions expressed.

Here the legal right and the ethical right are directly at variance. There can be no doubt but that the chart is the property of the physician, for it has been kept for his information by his agent. A bookkeeper does not own the set of books which he keeps, no more does the nurse the records which she has made. Ethically, however, the record should remain with the patient, and small minded, indeed, would be the physician who would contend otherwise.



America's contributions to science during the last seven years constitute but five per cent of the contributions of all countries. At least this is the estimate which one must make, if the awards of the Nobel prizes are considered just. In the seven years which have elapsed during which the provisions of Nobel's will have been executed, twenty-one prizes

have been given in science, one each year in physics, chemistry and medicine. America was recognized for the first time in 1907, the first prize in physics going to Professor A. A. Michelson, head of the Department of Physics in the University of Chicago. Professor Michelson's work has been in the field of optics. Among his achievements are a highly accurate determination of the speed of light, which has become a classic; the invention of a so-called interferometer, an instrument devised for detecting the relative motion between the earth and ether and for measuring minute distances; and a powerful spectroscopic device known as an *echelon* grating. The practical importance of these discoveries, says the *Popular Science Monthly*, is difficult to estimate, for many important scientific discoveries have not had a practical aspect until many years after their enunciation. Perhaps the best example of this tardiness is that of the dynamo which Faraday had in full operation in 1831, but which was not placed on the market until 1876.

As to the justness of the Nobel awards, the editor of the magazine referred to believes that the "recognition is as just as this country may properly claim." The distribution of these prizes in science is: Germany 7, England 4, France 3, Holland 2, Denmark 1, Sweden 1, Russia 1, America 1, Italy $\frac{1}{2}$, Spain $\frac{1}{2}$. Does one out of twenty represent our scientific productiveness or our proportion of the eminent scientific men of the world? As the editor of the monthly points out, scientific fertility, as measured by the number of men who have an international reputation, refers rather to the preceding than to the present generation. Thirty years ago there were but few opportunities for work in pure science in America. Today such opportunities are unexcelled, and the number of men of ability who are engaged in such work are many. It is said that

about one-seventh of the scientific articles published are by Americans, and the general average of these is probably as good as those of any country. Surely, in no other country have there been so many advances in scientific productivity during the past twenty years as in ours, and in the future awards the proportion of Americans honored will be steadily increased until we have no cause to complain.

The following papers on tuberculosis were read at the meeting held in Detroit, February 21st, for the purpose of organizing a state anti-tuberculosis society:

SOME MODERN VIEWS OF TUBERCULOSIS.

GEORGE DOCK, M. D.,

Professor of Medicine, University of Michigan,
Ann Arbor.

In the very beginning of a movement such as the one that calls us together, it is well to consider the nature of the task that confronts us, and the prospect of successfully facing it. The problem is a serious one, but our means of solving it are so much more certain and accurate than they ever have been before that we have every reason for anticipating victory in the end.

Even in ignorance of the true nature of tuberculosis, a distinct improvement took place along with the general advance of sanitation in the last half of the 19th century. No doubt some advantages were apparent in the ignorant but drastic and inhuman quarantine and disinfection that were practiced in certain countries at earlier periods.

But within the last quarter century, beginning with the discovery of the tubercle bacillus by Koch in 1882, our knowledge of the nature of tuberculosis has become immensely widened and deepened. We have positive evidence of many details that formerly were obscure, and these are not details of only academic importance but

precisely those that affect the question of prevention and of recovery.

It is my privilege to speak of some of these things. The time at my disposal is necessarily brief, and I must disclaim any intention of discussing all the features of the problem. I shall hope, however, to explain the more important ones.

By "tuberculosis" we mean some disease due to the tubercle bacillus. This is most widely known in the form of "consumption," also called pulmonary consumption or pulmonary tuberculosis or phthisis. It is a chronic disease, affecting the lungs especially; causing there not only the specific tuberculous changes, but also ulceration and destruction of tissue, and leading to wasting or consumption of the body in general by tuberculous or inflammatory diseases in other organs besides the lung, with a chronic poisoning shown by the symptoms of hectic fever. One-seventh of all deaths are due to this form of tuberculosis. It lasts on the average 2 to 3 years. It attacks its victims at the most important age—after years of care in the protection and development of the body and the cultivation of both mind and body to make productive members of society. It is not only the most common, but also the most important form of tuberculosis from the standpoint of prevention, for in it the germs of disease are dispersed from the body to a greater extent than in any other. The disability and ultimate loss of life of the immediate patient, therefore, represent only a small fraction of the harm possible in a single case of consumption. But there are other important forms of tuberculosis. It may appear as "quick" or "galloping" consumption, killing within a few weeks with symptoms of pneumonia or typhoid fever, or meningitis or "brain fever," often wrongly attributed to injury or mental overwork. It may occur as scrofula, a common, disfiguring and sometimes dangerous affection; or as "white swelling" in tuberculosis of joints, or "cold abscess," or spinal disease; or as appendicitis, pelvic inflammation or even wide-spread peritonitis, besides many other local diseases—painful, disabling, or even fatal. The tuberculous nature of many of these has only been made clear within the last 25 years.

The total extent of tuberculosis is much greater than is expressed by the common form of the disease in the lungs. One-third of all deaths are attributed to it. In most places it causes more deaths in any given time than all the more dread-

ed acute diseases together—including diphtheria and croup, whooping cough, measles, scarlet fever, smallpox, and typhoid fever. Cholera, yellow fever and plague answer the usual conception of pestilence, but the ravages of these three are slight compared with those of tuberculosis.

Tuberculosis, being a germ disease, is infectious. It is also contagious, but its history shows the difficulty of that term or any of its substitutes. As long as we have any records of the disease, back to the time of Aristotle, consumption has been more or less widely believed to be communicable. The search for the germ, that occupied many men for a long period, was stimulated by that belief. But the more accurate study of disease brought about by bacteriology has shown us that it is not enough to recognize whether a given disease is communicable or not. We must know exactly how it may be communicated. • We must know, to be more precise, 1, how the germs leave the body of the sick man, and in what condition; 2, how they may enter the body of another, and how favorable for their existence the body of the well man may be; 3, what chances they have of surviving, of retaining their peculiar powers, and of ultimately causing infection if they are kept for any time outside the body.

An enormous amount of the most painstaking work has been devoted to the solution of these problems, and we may be assured that we are now fairly well informed.

The germs leave the body with the products of disease in secretions or morbid discharges such as those of the nose, throat and bronchi, or the bowels and kidneys, or of the skin in lupus. In other words, they leave in case they have access to the outer world. From diseased joints, or glands, or the brain and spinal cord, or the peritoneum, they do not leave except through ulceration.

In case of disease of the throat or lungs, they do not occur in expired air. They may and sometimes are ejected in coughing, sneezing, hawking, or even in loud and forcible talking, along with droplets of saliva or mucus. In such cases they soon fall to the ground. Germs, no matter how small, have weight. They have no wings and so cannot keep themselves in the air. All other modes of exit from the sick man's body are of minor importance compared with expectoration—the discharge of products of disease from the bronchi and lungs—in the commonest variety of tuberculosis. From the number of

such persons, from the number of bacilli that are discharged—sometimes thousands of millions in a single day—its importance is obvious.

Not all the bacilli that leave the body are capable of setting up infection in other persons. Many are dead. However, we do not know, and cannot tell except by tedious experiments, what proportion are harmless. We have abundant evidence that many are highly dangerous.

And yet the tubercle bacillus is rather easily destroyed—much more easily than the dreaded anthrax bacillus, for example. Cultures of the germs, kept under favorable conditions, tend to die out in 6 to 12 weeks. In dry sputum they usually die within three months, but may live longer—6, 8 or 10. In moist and decomposing filth the germs may die quickly, or may long remain virulent. They resist cold, but are easily destroyed by heat, and are very easily killed by direct sunlight in a few minutes, by diffuse daylight in a few days.

The sputum of the consumptive is not necessarily dangerous on the street. If not disturbed, its germs will soon die. But in the meantime it may be ground into powder, be blown as dust, be swallowed or inhaled. Or it may be dragged into houses or cars on shoes or skirts, and then be pulverized, and in the dark rooms or corridors of houses or shops the life of the germs may be relatively long. Accordingly, the presence of bacilli in any place is not inevitable, but due to the carelessness or helplessness of the patient who harbored them. The danger would be trifling if tuberculosis were as rare as leprosy, but when every fiftieth person on the street is affected the multiplication of accidental sources obviously increases the risk.

The bacilli may enter the body by any passage, such as the nose, mouth, eyes, or other orifice, by wound in the skin, by carious teeth. In all these parts there are natural protecting arrangements, partly mechanical, partly chemical or biological, but these barriers are passed from time to time, through the number or virulence of the infectious germs that reach them.

They do not always cause visible changes where they first enter, but may reach distant and hidden organs before they unfold their peculiar activities. The lung, for example, is not always affected by inspired germs, but very often by germs that have been swallowed, have passed into the intestine, and from there have made their way by the blood and lymph circulation to the lungs. In the case of little children, per-

haps the commonest mode of infection is by sputum dragged within reach of the fingers, and by the latter inserted in the mouth.

Human tuberculosis is the most common and most important source of tuberculosis. The question as to the danger of tuberculosis in cattle is fairly well settled at present. The milk of tuberculous cattle may cause tuberculosis in people who drink it. It is, however, easy to prevent infection of that kind, and other sources are so rare as not to require mention at this time.

This part of the subject is well expressed by Cornet: The tubercle bacillus occurs as a rule only where there is an unclean consumptive, that is, chiefly in inhabited rooms.

It is well demonstrated that for the occurrence of tuberculosis we not only must have the tubercle bacillus,—the seed—but also a proper soil. This is spoken of as the predisposition of the individual.

Hereditary transmission of the seed we realize as a possible but extremely rare occurrence.

Hereditary predisposition is a more widespread condition. But it is not an inevitable event. In a representative series of tuberculous patients from various parts of Michigan, especially from farms and villages, I found a history of parental tuberculosis in only 26 per cent., equally divided among mothers and fathers. This was only twice as great as the proportion of cases of tuberculosis in the parents of non-tuberculous subjects of the same class. The figures not only show that in most cases tuberculosis of the parents has only a small part in the production of the disease in the children, but also that this part probably consists more in exposure to infection than in predisposition. The children of tuberculous parents may overcome the inherited weakness; the children of non-tuberculous persons may furnish a favorable soil for the germs.

The prevention of tuberculosis has to deal with these two factors—the seed and the soil. For the elimination of the former factor it is obvious that our efforts must be directed to lessening the amount of dangerous material, by having fewer sick people, and hastening the destruction of all such material. The problem is a large one, but not beyond the reach of such hygienic authorities as every civilized community should have, out of economic motives if for no other.

For the improvement of the soil—the increased resistance of the body to infection—we must follow laws of health that have been known for

thousands of years, but the real importance of which is just beginning to be realized.

The final success of the anti-tuberculous movement depends largely on a change of view regarding the possibility of recovery in tuberculosis. That patients recover from consumption is by no means a recent discovery. It was believed to occur by some men, at all times in the history of medicine. The difference is that now we all know that recovery is possible in the majority of cases, if treatment is begun in time and properly carried out.

Here we meet one of the most important needs of the time—the early recognition of the disease, so that recovery may be expected. This requires two separate and distinct steps. The first is the general knowledge of the possibility of early diagnosis and its importance in treatment. It is not very long since it was considered enough to make a diagnosis in the well-established disease, after extensive destruction of lung tissue. All this has been changed, and an exact diagnosis can be made very much earlier. From a more exact knowledge of symptoms it can often be made from the history of the symptoms alone, but in many more with the history aided by a careful examination of the body and of the sputum, with a tuberculin test or an X-ray examination. In order to get this done it is necessary for the patient to present himself to the physician in time. People must do for tuberculosis as they have done for appendicitis. Before the nature of that disease was known, most cases were seen by physicians only in the last stages—the fatal peritonitis. Now all that has been changed, with an enormous gain of life and comfort. The tuberculous patient must learn that when his disease begins with a cough, it is not cough medicine he needs; when it begins with chills and fever, it is not malaria and he does not need quinine; when it begins with hoarseness he does not need a spray or troches; when he loses weight, becomes pale, or weak he does not need a tonic. He must know that what he needs is a complete and accurate examination, and if this is not conclusive at once, repeated examinations. Treatment directed to the physiologic needs can be carried out from the first examination, but treatment must never be considered enough as long as the exact condition is not yet made out, or as long as any symptoms remain.

Quite as important as the early presentation of the patient is the ability of the physician to make the examination. Here is one of the greatest

needs of the time. Just as we expect students to learn anatomy and operative surgery without adequate provision for the supply of necessary material, so we expect them to learn to recognize a disease of the most protean features with no proper facilities for instruction. The ordinary hospital refuses to take the kind of patients that would furnish instruction in physical diagnosis; the dispensaries, in which the earlier stages should be studied, are not equipped for teaching. Large sanatoria cannot be built near medical schools in most places, but in every place where there is a hospital there should be proper facilities for the care and study of tuberculous patients in various stages, and every medical school should have a service for those who are not ill enough to require hospital treatment.

As regards treatment, we see the same thing that we have in other details of tuberculosis—no lack of proper difference of opinion on many trifling details, but on the other hand a really wonderful agreement as to the chief features, a union of all that has been believed and taught by the greatest physicians of all times. The only adverse fact is that our knowledge of the treatment needed is often beyond the ability to apply it. The disease is chronic, it requires full nourishment, it sometimes prevents patients from earning their living for shorter or longer periods. Even if the patient cannot always be wholly cured, he can be partially cured and so become less dangerous. Most important of all, he can be taught how to live, so as to endanger less than before his own health and that of his family and his associates. Sanatoria, proper diet, hospital care when needed, house sanitation—all these must be provided, and with the aid of the world-wide movement now going on we may be assured that they will be provided.

THE ANTI-TUBERCULOSIS CRUSADE.

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MR. PRESIDENT, LADIES AND GENTLEMEN:

The civilized world is confronted with a great health problem for which a solution is demanded. The problem is that of the disease known as

tuberculosis, or in its pulmonary form, as consumption. Let us investigate in a general way this problem and see what will be necessary for its practical solution.

About one-seventh of all people die of this disease. This means that of the 70,000,000 or more people living today in these United States, about 10,000,000, if nothing be done to restrict the disease, will die of tuberculosis. The population of the State of Michigan is somewhere near 3,000,000, 300,000 of whom, if we are to judge by the mortality records of the past, are to die of this disease, and they are dying at the rate of about 2,500 per year. Is not this condition of our race sufficient to demand our attention and to deserve our most strenuous effort? Moreover, the natural tendency, as the density of the population increases is for the disease to spread more rapidly. It is transmissible from the infected to the non-infected, and as serious as the problem is with us, it is still more grave in the older and more thickly populated countries of Europe, and investigations have shown that in some of our large and crowded cities there are blocks, especially in the tenement districts, in nearly every house of which this disease has claimed its victims. This has been shown to be true in Philadelphia by Dr. Flick, and in New York by Dr. Biggs. In these centers the germ of tuberculosis breeds and from them it gradually extends in every direction. Shall we in the face of this showing fold our hands and do nothing, or shall we utilize our brains, our energy and our money and eradicate this great foe to the happiness, health and life of our race?

There are those who say that some of us talk too much about this subject, that we frighten people and are creating a condition of tuberculo-phobia. Are we so cowardly as these critics imply? When was anything worth doing ever accomplished without effort? What is, or should be, the highest aim in life if it is not the betterment of the world in which we live and the improvement of the race of which we are a part? So long as man does not see the dangers that threaten him, he is by nature a coward and cringes from the blow that may fall upon him, he knows not from whence, but when the lurking place of the enemy has been pointed out the manly thing to do is to face the evil and remove it, tear it out, root and branch, and then the fear of it is gone. Thanks to the investigations of modern medicine, there have been placed in our hands the means necessary for the destruction of the hosts of

bacilli that constitute the army of the great white plague, which for countless centuries has levied its fearful tribute on helpless man. To fail to perform a duty once recognized is indeed cowardly, more than that, it is criminal.

The history of medicine shows that for centuries past there have been occasional keen observers in the profession who have been convinced that tuberculosis is a transmissible disease, that it is likely to go through families and to spread to intimate associates without reference to blood relationship, and that certain houses have become infected with the virus of the disease. In the seventh decade of the 19th century a French physician, Villemin by name, inoculated animals with the sputum from tubercular patients and thus induced the disease. To some animals he fed the tubercular material, others he caused to inhale it, into others still he injected it, and by all of these avenues he succeeded in developing tuberculosis in previously healthy animals. These experiments fully established the fact that the sputum of the consumptive contains the seed of the disease and that these may be implanted on healthy animals. In 1882 Robert Koch demonstrated that the seeds of the disease in the sputum and other tubercular matter consist of microscopical rod-like organisms, now known as the bacilli of tuberculosis. This organism is found in all tubercular tissue; in other words there is no tuberculosis without it. It is the cause and the sole cause of the disease. This bacillus is so small that 3,000 of them would have to be placed in a line, end to end, to extend one inch, and it is so light that it may be blown about in the dust and inhaled by its unsuspecting victim. This bacterium has been isolated and grown in pure culture in which condition it may be seen in any bacteriological laboratory. Animals have been inoculated with it, and the disease, tuberculosis, may be produced at will. We now know that the bacillus of tuberculosis may be handled by those who know how without danger, that it is easily destroyed when found outside the body, and that so long as we have it under proper conditions, there is no cause to be afraid of it. We know that this poison-producing, microscopical plant is present in all tubercular tissue and that it is cast off from the bodies of infected persons chiefly in the sputum of individuals suffering from pulmonary tuberculosis and in certain other discharges from the body when other tissues are involved in the tubercular affection. The ser-

pent is no longer hidden in the grass by the pathway. It lies before us in the open. Shall we bruise its head or allow it to escape and again bite man's heel? Destroy all tubercular discharges and the spread of the disease is at once restricted, and when such discharges are universally destroyed, the disease, which now destroys one-seventh of our race, will afflict mankind no more. This is all we have to do in order to accomplish this great result. Is it not simple, and does not our race deserve extinction if it fails to accomplish a task so easily done?

However, this work, as simple as it is, cannot be done by a few or by any one class or by the medical profession alone. The intelligent co-operation of the people in general is necessary. It should be distinctly understood that in the eradication of this and other diseases the work must not be left wholly to the medical profession. Being engaged in the study of diseases medical men learn how they originate and by what agencies they are spread. Recognizing the dangers and the means of avoiding them, it is the duty of the medical man to point them out to the public and to advise for the public safety. Having done this, his concern is no greater than that of every other intelligent citizen. Medical men are, as it were, outlooks on the ship of life and when they point out the shoals and sunken rocks it becomes the duty of the men in command and who constitute the government to see that the warning is heeded. The medical profession, at least the intelligent part of it, is now conversant with the means necessary to avert this danger. Will the nation heed the warning, or will it drive recklessly on, wrecking lives needlessly?

The National Association for the Study and Restriction of Tuberculosis has been formed and it wishes to enlist the co-operation of every intelligent man and woman in this country in the great work of emancipating our people from the fearful tyranny of the white plague. Is not this call worthy of your attention? What greater good can you do yourself and your fellow man? How is it proposed to accomplish this work? In the first place we want the facts made known to the people. We desire to carry on a campaign of education in regard to this matter, believing that as soon as the people generally see the necessity of taking hold of it they will do it in sufficient numbers and with energy enough to make it a success. We want intelligent men and women to instruct the people by talks and through books and pamphlets on the subject. We

want the States to build and equip sanatoria in which those in the incipient stages of the disease may be cured and where all infected persons may be instructed in the care needed to be exercised in order that the disease may not be transmitted to others. We want to restrict the disease by teaching consumptives, and others as well, that they should not expectorate on the streets, on the floors of places of public assembly, in the cars and other vehicles of public conveyance, and, in short, anywhere and everywhere except in proper receptacles that may be burned with their dangerous contents.

Tuberculosis is so seldom transmitted from mother to child during intra-uterine life that we may say it is not hereditary; it is not due to colds; it does not confine its ravages to the poor or to the rich, to the weak or strong. It is no respecter of persons or position. Let no one say this is a matter in which he has no concern; it involves the welfare of the race. There is no absolute immunity to this disease inheritable from your ancestors or acquirable in any way by you. So long as you move among your fellow men, with no care given to the restriction of this disease, you may acquire it. There is for tuberculosis no preventive inoculation or vaccination for the individual, but there is the possibility of eradicating it from the race. This is a matter in which concerted action is necessary. There are in the United States today more than 250,000 people in the active stages of tuberculosis. Without education along lines of prevention each one of these becomes a center for the spread of the disease. With attention to the disinfection of his discharges there would be no danger of the spread of the disease. The consumptive, so long as he is ignorant or careless, is a source of danger to the public as well as to his immediate friends. When he becomes informed concerning the nature of his malady and the method of its restriction, he can go where he pleases so long as he is able, and does no one any harm. When all are educated in the methods of restriction and these are carried out, no harm can come to anyone. Today residence in a hospital filled with consumptives is perfectly safe if the discharges be properly collected and disinfected. There is no reason why the tubercular individual should be shunned or isolated.

I have stated that there should be built sanatoria for consumptives. What would be the function of these institutions? The most important objects are as follows: (1) Experience

in sanatoria has shown that under proper management the disease can be arrested or cured in a large per cent. of incipient cases. One function would be the cure of curable cases. (2) Even in the incurable the progress of the disease may often be greatly retarded and on the average many years of comfortable living may be added to the lives of those who must ultimately die of this disease. This would be a second function of the sanatoria. (3) All the infected, both the curable and the incurable, could be so instructed in the methods of caring for themselves and destroying the infected discharges from their bodies that the disease would not be spread.

Every intelligent man and woman in the state should become directly and actively interested in this work. The physicians should always be on the alert to detect the disease in its earliest stages, for it is at this time that it yields such a large per cent. of cures. Only a few years ago the doctor was quite loath to tell his patient that he had consumption, because it often seemed equivalent to telling him he must die. Moreover, even the most intelligent physician of that time did not possess the knowledge necessary to make an early diagnosis. Now, all of this is radically changed. The time has passed when the physician can make a careless examination and say "it is only bronchitis, or a continued cold," or something of that kind. The physician who does so today, when his patient really has tuberculosis, is guilty of a highly negligent, I should say, a criminal act. An early diagnosis can be made in the great majority of cases and the physician can say plainly to his patient: "You have tuberculosis, but there is no other grave disease from which so many people recover if it be recognized in time and treated intelligently." The physician can speak positively and confidently. It has been my privilege for many years past to deal almost exclusively with tuberculous patients. Frequently a husband comes in to me and says, "I think my wife has tuberculosis; please examine her, but if she has the disease do not tell her." But I say, "I do not do that kind of work. If she has tuberculosis I will tell her so and tell her she must fight for her life," and lay down the rules on which this warfare is to be carried out. The day is past when the physician need see his patient helplessly drift into the last stages of the disease while he administers worthless placebos. When both physician and patient universally arrive at an intelligent understanding of this sub-

ject no one will reach the stage of exhaustion now so typical of this disease. The threatened one will seek aid early and his physician will be able to give him what he seeks. Every one who has any reason to suspect the implantation of tuberculosis should be examined at least twice a year even when he is apparently doing well, and the physician to whom he comes should make a most searching and scientific examination. So far as tuberculosis is concerned, at least, medicine is fast leaving the quicksands of uncertainty and planting itself on the solid earth of science.

There is another most beneficent and humane object to be accomplished by these state sanatoria for tuberculosis. As one whose practice has been largely with this disease for many years, I have had occasion frequently to realize that the arrest of tuberculosis is often a matter of dollars. The rich patient can procure the best food, he can rest from work and he can place himself under the most favorable surroundings. All of these things are denied the poor, but now the state is to provide for the poor even that which the rich could 25 years ago but partially secure. The State Sanatorium will be a great, a deserved and a wise charity. To support such an institution by public taxation is a legitimate method of taking from the rich and giving to the poor, and the rich should pay taxes for this purpose most willingly for two reasons. In the first place, he is thus diminishing the chance of becoming infected himself, and in the second place he is restoring the poor to a state of health in which he will be able to provide for himself.

I hope that the people of this great state with the good repute for wisdom that they have, will take hold of this matter with the determination to rid themselves of this disease. We should begin by the formation of anti-tuberculosis societies in all of our cities. I wish you could have the enthusiasm that is now found in Germany concerning the restriction of tuberculosis. You hear it over there from the merchant, from the clerk, from the cabman that takes you to the depot, "Ein Deutschland ohne Tuberculose." Shall we not also have a United States of America without tuberculosis? There are in every city some who are in the active stage of tuberculosis and who are ignorant of the fact that they are a menace to the lives of others. Some of these are poor and must work as long as they are able, and in the factories and work shops, in the houses of business where these people are employed they

are endangering the lives of their fellow-workers, employees and their customers. These people need to be shown that this is true and instructed in the methods of prevention and then, if able to do so, they can continue their work without being a source of danger to others. Three hundred years ago leprosy was as widely distributed in Europe as tuberculosis is today. But our hard-headed ancestors rid themselves of this disease. Three hundred years ago there were 1,900 leper hospitals in Western Europe. A leper could live only in one of these hospitals. If he traveled by day he must wear a distinctive garb, and at night a bell attached to his garments heralded his approach. Leprosy has disappeared from Europe. Shall we not do the same in a much more humane and civilized way with tuberculosis?

The exhaled air from the lungs of consumptives, even in the last stages of the disease, is germ free, and there is no danger of acquiring the disease by simply being in the presence of the consumptive. I have been greatly surprised in some places that people are afraid to have a hospital or sanatorium for the treatment of tuberculosis located among them.

I suppose if some one would tell you now that Hagenbeck's train had got wrecked in this city and all the animals had escaped, the bravest here would hesitate about leaving the hall; but if Hagenbeck came here with the animals all caged you would be glad to go and see them perform. It is the same with the bacillus of tuberculosis; only you might see the lion and hear its roar, but the tubercular bacillus gets in its work without any such accompaniment. When the consumptive coughs, germs are often thrown from the mouth in the spray from coughing, and a handkerchief or a Japanese napkin should be held before the mouth in coughing. Then the matter coughed up from the lungs of the consumptive in the active stages contains the germs in great numbers. If this be thrown on the floor or sidewalk it dries and is blown about in the dust by the wind and may be inhaled by any one. Uninfected dust cannot cause tuberculosis. It is only when the bacilli of this disease are introduced into the dust of our streets and houses that there is danger of the spread of the disease in this way. When the consumptive expectorates on the pavement, the bacilli are scattered by the wind and adhere to our feet and clothing and are brought into our houses. Some one said to me not long ago, that these infectious diseases are a good

thing for the human race. They kill off the people who ought to die, and in the long run the race is a great deal better for it. Now suppose a consumptive expectorates on the streets of Detroit; do you suppose that only the vicious and the wicked are going to inhale the germs that are blown about in the air? You might just as well, with just as much sense, place two men blindfolded at each street intersection in Detroit, and march every man, woman and child up and down the streets, and place in the hands of these blindfolded men repeating rifles and tell them to shoot into the crowd as it went by. Do you suppose that only the vicious, only the liars and the thieves would be killed? Have we, the intelligent people of the United States, not reached the stage when we should say to the bacillus tuberculosis, or the germ of any other disease, we will not trust to your intelligence in selecting those who should live and those who should die? Man has already accomplished great things in the restriction of the infectious diseases, many of which, such as the plague and typhus fever, which once greatly increased mortality, are now known to exist only in those nooks and corners of the world where the conditions of life on account of ignorance, superstition and poverty are most unfavorable. Within one hundred years the average of human life has been nearly or quite doubled, and yet the majority of deaths happen prematurely and there is no reason why, if we only put to practical use the knowledge we already have, the average length of life should not again be doubled. Think what might be accomplished in a city like this if all your good citizens could be interested in the work. You would have a special hospital for the treatment and education of consumptives. Many would be cured and all would be instructed in the method of restricting the disease. You should have a dispensary where suspicious cases could be examined and the disease detected in its incipency. A corps of trained nurses and physicians attached to this dispensary would be in readiness to visit the infected homes, disinfect the premises, detect and abate any sanitary deficiencies, and teach the people how to avoid infection. Would it not be a wise move to embark in this work? What better service could you render yourselves and your fellow-citizens? But some are too busy, some are too indifferent and there remain only a few who are likely to be moved by motives of this kind. Let these few embark on a

campaign of education, and others, seeing the good example, will surely follow.

This is not a crusade in behalf of the doctors. They have nothing to gain by this. In fact, we are impoverishing our own pockets by the crusade that we are preaching all over the country today. I am often reminded of a governor of our state, who, a few years ago, was called upon to preside over a convention where doctors were assembled from Maine to Texas, and from the Dakotas to the gulf, to instruct people as to how to prevent disease; and when he made his opening address the governor said: "If, during my term as governor, I should be called upon to preside at a meeting of lawyers met for the purpose of preventing litigation, I would say with Simeon of old: 'Lord, now lettest thou thy servant depart in peace, for mine eyes have seen thy salvation.'"

It is strange and disheartening when we see how slowly that knowledge which may be utilized for man's good diffuses through the masses, and how tardy people are in applying beneficial discoveries. We grow impatient, while people call us sanitary cranks and pay no heed to the teachings of science, but those of us who are not pessimists, and God pity those who are, must believe that the growth of the race is toward perfection and that it will not deteriorate.

What sanitary science can do is conclusively shown by the interference of the United States in Cuban affairs. When the historian of the future comes to write of the little war we had with Spain, he may be in doubt as to whether Sampson or Schley won the victory at Santiago; he may be in doubt whether Shafter was or was not too heavy to conduct the land campaign, but the most brilliant page in that history will be the work of Reed, who banished yellow fever from Havana, and the work of Gorgas, who made Havana a healthier city today than New York.

The knowledge that we have concerning the causation and spread of tuberculosis is not theoretical. It is positive and practical. If the dust of a room that has been occupied by a consumptive who has been ignorant and careless and has expectorated on the floor, be swept up and injected into a guinea pig, the animal develops tuberculosis. On the other hand, the dust from rooms not infected, even if it be a hospital in which there are many tuberculous patients who have been intelligently practising the methods of restriction, when injected into like animals has

no such effect. The bacilli are not given off from moist sputum. It is only after the expectoration has dried that its contained bacilli become diffusible in the air. Handkerchiefs and clothing soiled with infected sputum should be disinfected before the discharges dry and become transmissible through the air. While tuberculosis is not a hereditary disease, we know that it runs in families and that the children of consumptive parents have an increased susceptibility to the disease. Such people should take the utmost precautions against infection and should be carefully and thoroughly examined at least twice a year by a competent physician.

I cannot resist the temptation to say parenthetically that anything which cheapens food to the poor, places within the reach of the poor man the chance of getting the best food in sufficient quantity, is an aid in the treatment of tuberculosis; and I want to say on my own responsibility, that a government that allows such a thing as the beef trust to exist, aids and abets in the spread of tuberculosis, and is doing a criminal act. Rest, and abundance of good food, without, or with but little medication, suffice to lead incipient cases to recovery. The value of climate *per se* has been greatly overestimated and incipient cases can be as easily cured in Michigan as in Colorado. There can be no doubt that removal from infected localities and life in an equable clime, where the proportion of sunshine, nature's great disinfectant, is greatest, are beneficial because continued reinfection is one of the greatest sources of danger to the infected. But if the discharges of tubercular individuals be destroyed all chance of infection is done away with, and when this is done, Michigan will be free from this disease. Experience in sanatoria for the treatment of tuberculosis both in Europe and in this country has demonstrated that climate is not of prime importance. At the Phipps Institute in Philadelphia Dr. Flick states that the results compare favorably with those obtained in climates once regarded as essential to the cure of the disease.

I would not have you understand that the extinction of the bacillus tuberculosis is to be an easy task. It will require time, patience, and, above all, intelligence. If all the infected discharges from every tubercular individual could be immediately destroyed the disease would disappear in one generation. There would be no new implantations and with the death of the last infected person the disease would disappear. But

this possibility we must not hope to realize. The task before us, while plain, is a herculean one, and one which will require the best efforts of the race through more than one generation. We must provide sanatoria not only for incipient cases, but for the advanced ones as well, for it is from the latter largely, that the disease is spread. In the advanced stage the sputum is likely to be most abundant and richest in bacilli, and as the patient grows weaker he is less attentive to the disposition of his sputum, and he is likely to scatter the bacilli all about him; therefore there must be sanatoria for the care and treatment of persons in the late stages of tuberculosis. I would not have it understood that such institutions should be regarded as homes for incurables, and that scientific treatment should be disregarded. As long as the consumptive lives every possible aid should be given him and the number of apparently hopeless cases that improve is surprisingly large. As Dr. Flick has pointed out, much in the restriction of tuberculosis—by taking care of the dying consumptive—has been done in London. He says: "A little over fifty years ago the English people began to establish hospitals for consumptives in London as a matter of humanity. The work met with favor and the beds gradually increased until they numbered thousands. At that time the death rate from consumption in London was about the same as that in Paris and all the large cities in the world, namely, about four per thousand. No other preventive measure was introduced in London. At the end of fifty years, London, the largest city in the world, had the lowest death rate from consumption of all, about two per thousand, and Paris, where no consumptive hospitals had been established, still has its four deaths per thousand from the disease."

If tuberculosis goes on decreasing in such cities as Hamburg, where they have for the last ten or twelve years had sanatoria for the treatment of incipient tuberculosis, at the same rate, the century will not be far advanced before tuberculosis will be known only as a historical disease.

Consumption is largely due to in-door life, and the more crowded habitations are the greater is the prevalence of the disease. Statistics show that this disease prevails in direct proportion to the number of individuals occupying a room. This is the reason why it is so frequently seen among those who dwell in the poor and crowded tenements of the large cities in all parts of the world. It must not be inferred, however, that tubercu-

losis is wholly an urban disease. There are many farm houses in Michigan infected with its bacilli, and the farmer, who spends such a large part of his working hours in the open air, often sleeps in a small, unventilated bedroom, and the good effect of his life in the open air is vitiated by the conditions prevailing in his home, and his wife and children are more closely confined to the insanitary habitation. I often think that civilized man has overdone his housing. In his desire to protect himself from beasts, his enemies, and the rigors of the weather, he has gone to an extreme and seems to think that he can eat, sleep and rest only under cover, when in truth we would be much healthier and happier if we spent more time out of doors. Even the well-to-do at great expense have large and beautiful lawns about their houses, but they do not live on them, they shut themselves in their houses, keep others out of their private parks, and only look at them themselves. The average American is so afraid of taking cold that he does not allow himself enough fresh air to breathe. I think that it is within the bounds of truth to say that more harm comes to the health of the average American from his senseless fear of taking cold than ever comes to him from exposure to inclemency of weather. We should live out of doors in nice summer weather, and we should sleep with open windows at all seasons.

The time is too short for me to discuss all the precautions necessary to avoid becoming infected with the bacillus of tuberculosis, or to get relief after infection. We know that this, the greatest scourge to our race, is a preventable disease; therefore let us prevent it. Let us inaugurate this great work, which, when it is fully done by our descendants, will be the greatest of human achievements. I hold that man has already reached a position of intelligence and responsibility in which he becomes a co-worker with the Creator in the betterment of himself and his brother. Our future lies largely in our own hands. Shall we move onward toward the promised land of human perfection, or shall we admit that life is a failure and that the race is without the opportunity of betterment? If we can make this world a fairer habitation for happier and better generations we should seek no nobler task and ask no higher reward.

TUBERCULOSIS IN MICHIGAN.

FRANK W. SHUMWAY, M. D.,
Secretary of the State Board of Health.

Every individual case of tuberculosis is a center of infection and can and should be safeguarded. How?

Before taking up the "how" part of the subject, I want to just briefly outline the several ways and conditions under which tuberculous persons become or are centers of infection; and bear in mind I have reference in this paper mainly to the incipient or walking cases of this disease, where the cough and expectoration are a prominent feature, for therein lies the great danger of contagion, and in my judgment it is toward this class of cases that our efforts should be directed where the most good can be accomplished.

Being no respecter of persons, tuberculosis attacks all people alike, the rich and the poor, the high and the low, the good and the bad, the rich man in his palace as well as the poor man in his tenement home; but owing to the many outside or contributory causes such as occupations, and unsanitary conditions at work and in his home surroundings, that come to the person in moderate or poor circumstances, tuberculosis finds more ready victims among this class; and the importance of the problem is emphasized when you take into account the fact that necessity in the form of grim poverty often compels the victim as wage-earner of the family to continue at his employment (disguising or denying the fact that this disease is present, even after being so informed by the physician) until it passes into the advanced stage, and relief which should have been accorded the individual, is denied him.

This individual must then of necessity under these conditions become a center of infection to his or her family, to the associates in the shop, factory, office or store.

Again, the teacher in the school room, generally a woman, working in an overcrowded room, imperfectly ventilated, breathing an atmosphere dust-laden and germ-infected, contracts the disease, but still she continues at her desk unmindful of her cough, the labored breathing and gradual loss of strength, unmindful or careless of the fact that she is a center of infection to fifty or sixty pupils coming in daily contact with her. The school boards themselves are not al-

ways clear-sighted in this matter, and not infrequently allow such a condition to continue (whether from mistaken sympathy or false economy, the menace to the children remains the same) long after the necessity for removal of the teacher appears. We pension old soldiers and their dependents out of gratitude for their services. Is it not strange we fail to pension tuberculous school teachers out of mere protection to our children?

Again, take the indigent poor in our county houses who are afflicted with this disease. In a great majority of cases no provision is made for isolating them from the other inmates, no special treatment given and little if any attention given to restrictive measures.

I might go on and enumerate other conditions under which the individual becomes or is a center of infection, but it is not necessary, for we must all concede the fact that they are. And when we take into account the further fact that of 2,800 cases (in round numbers) which come annually to the knowledge of the State Department of Health, only about three-fifths are reported to the department by the local boards of health, or to be more explicit, out of the 2,800 cases only about 1,680 receive instruction from the department and are in sympathy with our sanitary laws sufficiently to co-operate with us to prevent the spread of the disease. Scatter the other 1,120 over the State as centers of infection together with the great number of cases that we know exist but are never reported or recorded and you have the situation as it exists in Michigan today.

This being true, our task is to enlighten, to educate every individual who shows signs of the disease. How to reach tuberculous subjects and control them in the early stages of their infection, I desire to consider with you; and I believe it will be profitable and interesting to do this in connection with a review of the present factors working toward that end.

We naturally turn our searchlight upon those organizations and institutions which profess devotion to the cause of the sick, the suffering, and the destitute, such as hospitals, sanatoria, county homes, state institutions, etc. By letters of inquiry sent out to 212 such institutions and retreats in 1906, the State Department has been able to obtain information concerning the general attitude of these institutions toward tuberculous subjects, and to what extent they admit and treat them.

Replies were received from the majority of all

the institutions: from about three-fifths of the hospitals, sanatoria; from four-fifths of the State institutions, and from four-fifths of the county homes. Of the county homes and State institutions, the majority admit *any* eligible person, regardless of his tuberculous symptoms. The majority of hospitals, sanatoria, etc., on the other hand, *exclude* all tuberculous persons. Of the hospitals and kindred institutions, only eleven admit a tubercular patient, whether an incurable, a moderate or walking case, and the necessary sanitary precautions are reported as being enforced. Out of these eleven, six appear to enforce hygienic treatment of their patients, including fresh air and forced-feeding. Twenty hospitals and kindred institutions, including the above-mentioned eleven, admit incipient cases; fifteen admit walking cases, and thirteen admit incurable cases. While nearly all of these enforce the necessary sanitary precautions, only a few provide special curative treatment. That is, while about twenty per cent of all the hospitals and kindred institutions in Michigan report that they *admit* tuberculous subjects, only about ten per cent take any steps to cure them. It would appear that patients are, as a rule, admitted to these institutions on some other complaint or ailment, and while there they receive sanitary protection and instruction as to their tubercular condition. That the hospitals enforce precautionary measures to prevent any tuberculous patient from infecting his neighbor in the hospital is but a practical business policy; and we conclude, therefore, that so few hospitals taking steps to afford cure for tuberculous subjects, only a very small percentage of such subjects derive any benefit from such institutions, and they must look elsewhere for shelter, care and treatment.

While the foregoing account relates to the general hospitals, we find that in the establishment of special hospitals for tuberculous subjects, Michigan has made a small beginning. As far as our information goes, we can mention two private institutions for such patients, one in Kalamazoo, one in Niles. There are, however, but two *public* institutions especially for tuberculous persons in Michigan: the Tuberculosis Sanatorium at Howell, established and maintained by the State, and the Tuberculosis Hospital at Grand Rapids, established for city subjects and maintained by the city. Last spring, a movement was rumored to be on foot in the city of Kalamazoo for the establishment of a tuberculosis colony there, for the control of its city cases, a

most worthy, urgent movement; but we are not informed that any substantial progress has been made. The citizens at large in Michigan who are today afflicted with tuberculosis must look to the State Sanatorium for their relief and cure and instruction how to prevent the disease from spreading. The State Sanatorium will do all it can to take care of this situation; it will do a noble and humane work; but let us not for one moment think that it is the goal of our fight against tuberculosis! It is but the guide post. It cannot alone quench this fire wasting our inhabitants and their efficiency; it is but a drop in the bucket. In truth, the sanatorium is but the opening wedge to pry off that heavy lid of public apathy which shuts in opportunity for greater efficiency. Truly, to meet the need we might well emulate our Grand Rapids friends. The fruit of the labors of such men as Dr. Collins H. Johnson and others is at hand. A home for poor people afflicted with tuberculosis, where they can be taken care of at city expense, wisely instructed, faithfully watched, properly clothed, fed and sheltered, where their only sacrifice and loss is their wages, which they can contrive for a time to suffer,—here is a concrete reward for those public-spirited, progressive citizens who have devoted so much of their time fighting against tuberculosis, talking before the people of their city, organizing the thinking and influential citizens, all efforts bent to one end, to stamp out this disease.

I believe such a city hospital or retreat devoted to tuberculous subjects is the need of every locality in Michigan, and that working toward the realization of one is the proper and urgent line of attack for this anti-tuberculosis association, for the organized medical societies, for the enthusiastic and progressive practitioner. The family physician more than any other individual worker in the cause of health, has a great opportunity for making this fight against tuberculosis efficacious. His singular opportunity creates an important responsibility, not only as an individual, but as a unit, also, of the medical society. Whip your medical societies into line, gentlemen; do what you can to make them represent far more than they do at the present time this progressive stand against tuberculosis in your community.

I believe that the condition as relates to tuberculosis in our county home can be greatly improved. While not as exclusive as the general hospitals and sanatoria, the county homes show no such facilities for taking care of tuberculous patients. Out of fifty making reports to us, fif-

teen only observe the proper disinfection or destruction of the sputum, in addition to keeping the patient in a separate room. In three instances only the advanced cases are reported as kept in separate rooms. Fourteen homes report the enforcement of the care of the sputum only. Two, alone, show any attempt to give the out-of-door and forced-feeding treatment. The Kalamazoo County Home and the Wayne County Home both stand for progressive policy, and make a specialty of tuberculous cases. Indigent persons necessarily imply some physical deficiency; old age, some specific disability, shiftlessness, or what not, and are therefore a class peculiarly susceptible to the contraction of this disease. The inmates of our county homes should be protected against any possible spread of infection from another inmate. They are prisoners there through a destiny they cannot master, and are forced to accept their lot whether it be life-giving or death-dealing. Whether they are properly safeguarded depends, without doubt, upon the professional intelligence and personal conscience of the county physician. This scattering, inefficient observance of protective measures in our county homes, as shown by the data given above, should be corrected, and here, I believe, we, as sanitarians, may make a specific beginning and accomplish some definitely beneficial results.

The province of the State Board of Health, its efforts put forth in the direction of educating the public in connection with the local boards of health (some 1,600) is, I am sure, familiar to you all. But there is one point which, in conclusion, I wish to bring out with emphasis:

In the foregoing part of this paper it was suggested that a large number, probably several thousand, of cases are apparently never under sanitary supervision. These we must reach. Again, even in those cases under the supervision of the health officer, we do not always find complete observance of the precautionary measures. In the two years 1904 and 1905 we find that the disinfection of the sputum was thorough in only forty per cent of all reported cases; that of the articles likely to be soiled by sputa, only forty-two per cent were thoroughly disinfected; of the bowel and bladder discharges, only eighteen per cent were disinfected properly; and of rooms, only thirty-seven per cent were thoroughly disinfected. Here, then, too, we need to take up our work. We must knit together into one serviceable fabric all of the forces having to do with the complete control of these thousands of tuber-

culous cases. One force is the individual himself, another is his physician, a third, the local health authorities, and lastly the State Department of Health and its bacteriological laboratory. The suspicion on the part of the physician of an incipient case of tuberculosis can be verified or relieved by having the local health officer send a sample of sputum to the bacteriological laboratory recently established in connection with the State Board of Health. Right here, let me emphasize, is the first important step. Locate your enemy, take aim, then fire. Aside from this practical use of your local health official, make the local board itself more aggressively an educational factor in your community; dislodge it from its present limitations; make it what it in reality should be, a bureau of information in sanitary matters, the hub from which radiates efficient public health work. With the practical use and benefit and knowledge the laymen all over the State are to derive from our State Bacteriological Laboratory, I look to that time when the people at large will not so stubbornly resist this fight against tuberculosis. The tradition of personal aversion to the idea that one has tuberculosis, the present difficulty of getting a consumptive to realize or admit his affliction, is founded, I believe, in the heretofore accepted fatality of the disease. It was contemplating death itself, and from that every human heart shrinks. But with the history of cures of persons far advanced in tuberculosis, with their finding out that a timely analysis of sputum is the basis of definite courses toward the eradication of the disease and their cure, with their recognizing that to admit the presence of the disease is to lock the barn door before the horse is stolen,—a few grains of confidence scattered from this educational plant, the laboratory, I am confident will greatly increase our harvest of public co-operation and ultimate efficiency and happiness. It may be of interest here to mention the plan of the State Department of Health to publish as early as may be a set of instructions in foreign languages, as Polish, Finnish, Scandinavian, Italian, German, etc., relative to the necessary precautions in cases of tuberculosis. It is proposed to make such instructions convenient to the use of the profession, and through them to obtain their more complete distribution where needed.

In my judgment, therefore, since only by education of the individual can we hope to succeed, it is up to this Association, to the sanitarians, and to the medical profession of our State, espe-

cially the family physician, to co-operate with his local board of health, and through that with the State Department of Health and the bacteriological laboratory, to the end that this dread disease with its high mortality rate, entailing untold suffering upon thousands within our State, may be brought under subjection.

TUBERCULOSIS PROBLEM IN DETROIT.

GUY L. KIEFER, M. D.,
Health Officer, Detroit.

Tuberculosis in Detroit is a sad subject and yet I am gratified with the opportunity of talking on this subject to so many persons interested in the prevention of this terrible disease. I have been asked by both the chairman and secretary of this committee to make my talk brief, to limit it to ten minutes. I will try to say all that it seems to me to be absolutely necessary to say in that short time, but I ask your indulgence if I should transgress.

I have said on many previous occasions that public health work depends for its success largely on the co-operation that is given the public officials by the medical fraternity and by the public. I believe I can say without fear of contradiction that Detroit may be justly proud of the scarcity within her boundaries of contagious and infectious diseases with the exception of tuberculosis, or, more broadly speaking, diseases of the chest. The conditions, as far as contagious diseases in general in Detroit are concerned, are good, exceptionally good, but in regard to tuberculosis they are bad and I may say, truthfully indeed, exceptionally bad. This indicates then that in our fight against nearly all of the diseases we have had the hearty co-operation of the medical profession and the public, but in the case of tuberculosis alone the co-operation has been lacking.

Let us look at the history of the fight against tuberculosis in this city. Long before my advent as health officer, the Board of Health determined that notification and registration of all cases of tuberculosis was necessary and they demanded reports from the physicians. What was the result? Our most prominent physicians, men rated as specialists in diseases of the lungs, refused to recognize this demand, this first step in the pro-

posed fight against the common enemy, taking the position that tuberculosis is not contagious in the same sense as diphtheria, scarlet fever and small-pox. This antagonism resulted in unsettling the question of reporting cases in Detroit so completely that we have never recovered from it, and although the case was never decided it is impossible even now to get reports of tuberculosis.

What was the next step taken to prevent this disease? The Board of Health determined to secure legislation regulating the spitting nuisance. One of the first things done during my administration was the passage and publication of an order by the Board of Health forbidding spitting. Notices were put up in street cars and other public places and as educational propaganda they had some effect, but when it came to enforcing our new regulation, we were informed by the corporation counsel that it was only a rule of the board and not, in effect, an ordinance. Subsequently we succeeded in having an ordinance forbidding spitting in public places, but public sentiment has never been strongly enough back of this law to make it possible of enforcement. Complaints have been made from time to time, but no punishment has ever been meted out to the guilty spitters and the complaints have even been made light of by the courts and the public press. Nevertheless the "don't spit" signs have done some good and the habit is not nearly as universal as it has been in the past.

The disinfection of houses in which tuberculosis has existed is limited almost entirely to houses in which persons suffering from the disease have died. We realize that the living cases that move from place to place should be kept track of and their houses disinfected, but here again we are handicapped, because these cases are not reported. In order to spread the doctrine of fresh air, proper food and sunlight and to get the public interested, we succeeded about two years ago in bringing the exhibit of the National Association for the Study and Prevention of Tuberculosis to Detroit. At that time I invited all the physicians who have specialized in these diseases or who have in any way shown an interest in this subject to act on the local committee. We obtained good speakers from other cities. We published notices of the exhibit and lectures in every conceivable way, sending out, among other things, 100,000 hand bills, and yet we succeeded in getting an attendance all told of about 9,000 persons as compared with 52,000 in the city of Milwaukee. The opening afternoon was intended especially for

physicians. We solicited their interest and co-operation by special invitation, but as I remember it, out of the 800 registered physicians in Detroit some twenty were present at our meeting. When the exhibit was over one of the older practitioners of our beautiful city busied himself by telling people that this exhibit was only a political scheme to advertise the health officer and some of his friends.

Medical inspection of schools is well established in Detroit and more attention will be paid in the future to cases of tuberculosis among the children. It is the intention of the Board of Health to require a complete physical examination of each school child at least once a year, as soon as we can enlarge the work of medical school inspection, which we hope will not be later than next fall.

The smoke and dust nuisance are receiving proper attention on the part of the Board of Health. The smoke ordinance, so-called, was first introduced upon the recommendation of Health Commissioner S. T. Douglas, and although its enforcement has been somewhat slow, we are gaining ground every day.

In April, 1906, we established in the Board of Health building a so-called "Tuberculosis Clinic." Dr. V. C. Vaughan, Jr., volunteered his services for this work and has remained in charge of the clinic since its beginning. The object of the "Tuberculosis Clinic" is, by offering and giving free advice to tuberculosis patients, to reach their homes and teach prevention among their families and friends. We have had the co-operation and hearty support of the Visiting Nurse Association in this work and the city owes this association a debt of gratitude. We have appealed to the Board of Poor Commissioners and to the physicians of Detroit to send us cases, but the growth of the clinic has been slow. Last summer the Board of Health obtained an appropriation of \$600 to be used for the "Care of Tuberculosis Patients." This fall we began furnishing milk and eggs to our patients and in order to follow up this work the Visiting Nurse Association has given us a nurse who devotes her entire time to our tuberculosis work. With all of this willingness on the part of the Board of Health and their volunteer nurse and physician, we have at present only about twelve or fifteen patients and houses under observation. Why aren't we overrun with work? Certainly there are hundreds of worthy poor cases in the city, a proper supervision of which would lead to a certain restriction of the disease in the very quarters in which it is most prevalent. The other

day a prominent physician, attending at one of our large dispensaries, said to me: "Suppose, doctor, we have a suspicious tuberculosis case at our dispensary, can we send it to your clinic for diagnosis, clinical and bacteriological, and if it is not tuberculosis, will you return it? You see, we don't like to turn all of our cases over to some other clinic." The answer is: "Certainly you can. You can do more than that. Tell us of your cases. Let us send our nurse to their home and we will give them special diet if they need it and you say so, but we want them and you in return to observe all preventive measures. We are not here to increase the number of cases, but to limit them. We care nothing about the treatment except as an aid to the prevention. In the case of diphtheria and scarlet fever you can turn your poor cases right over to us to be sent to the hospital; why act so differently with tuberculosis? We are not going to run off with the patients."

Among the patients whom Dr. Vaughan has under observation, a few have learned to live out of doors entirely, all through the winter. We have found that it takes about three weeks for a patient to become accustomed to the out-door life and after that time they like it and feel so much better that they refuse to go back to the old stuffy rooms. The problem then presents itself, why not start a tuberculosis sanatorium for such patients somewhere in Detroit, with its principal object one of education for the patients, a sort of training school? Let the purpose be to keep each patient about a month, and then, after they have received their training, return them to their respective homes to continue the treatment and to preach the gospel of the cure and prevention of tuberculosis. This step has been undertaken. We have made a beginning. We now have a tuberculosis house with one patient, on a piece of ground owned by the city, in the northwest section of Detroit. If we can gradually increase the capacity so that twelve or fifteen cases can be thus cared for and instructed, we will, in the course of each year, graduate about 200 pupils from our tuberculosis sanatorium or training school and our campaign of education will then progress much more rapidly.

While all of this work has been going on under the direction of the Board of Health, various societies, organizations and individuals interested in the work have been laboring more or less independently along the same lines. The Detroit Society for the Study and Prevention of Tuberculosis was organized in the spring of 1905 and its

members were largely instrumental in the establishment of the State Sanatorium for Tuberculosis at Howell. The Visiting Nurse Association has devoted much time and attention to this work and the aid rendered by this society to the Board of Health has been invaluable. Without its support we could never have carried on our crusade to its present advanced lines. A society composed of the daughters of prominent families in Detroit, known as the Tau Beta Society, is doing excellent work in the restriction of this disease. Besides these organizations some of the physicians are individually lending their efforts toward the end of eventually ridding our city of tuberculosis.

In conclusion, what shall I say? In the language of the street, forceful if not elegant, everybody "boost, don't knock." Let us all work together for the accomplishment of this very worthy cause. Let us make public sentiment so strong that no one in the future dare violate the anti-spit ordinance. Let us all see to it that various laws bearing directly and indirectly upon this subject, are enforced because of the demands of public sentiment and public opinion. Let us all see to it that the fifteen hundred dollars asked by the Board of Health for this purpose for the coming year be allowed and, if necessary, as much more. In a word, let us co-operate, let us unite our efforts, now, altogether, let us succeed.

THE MICHIGAN STATE SANATORIUM FOR TUBERCULOSIS.

FRANK B. LELAND,

President of the Board of Trustees.

Tuberculosis has long been known as the most potent enemy of mankind. Its ravages have far exceeded those of war, of pestilence, or of famine. From earliest history it has been known to exist, and until recently its victims were without hope. Neither are men the only objects of its attack, this disease being common in cattle and other domestic animals, as well as in animals feræ naturæ when they are brought under the subjection of man.

Tuberculosis long was considered an hereditary disease and the belief was general that heredity was to be blamed for the vast majority of cases. Now, you doctors, with the advancement of medi-

cal science have proven this belief to be entirely erroneous and have shown the cause of tuberculosis to be infection; that is, the transplanting of tubercle bacilli from one person or animal into another. It is only of recent years that we have known this. The cause once having been discovered, it has only remained to find a method for removing it.

Within the lives of most of us it has been found that the best way to combat tuberculosis is for the patient to live as much as possible in the open air, eat nourishing food and take only a limited amount of exercise, the latter, particularly, being regulated by the condition of the patient. This treatment has been found most efficacious, more particularly, of course, in incipient cases, it being claimed by the various sanatoria that from 85 to 90 per cent of such cases treated are either entirely cured or the disease permanently arrested. If this is true, the result of treatment applied to all incipient cases ultimately would result in an almost complete extermination of what has come universally to be termed "The Great White Plague." Manifestly, this ideal situation cannot be brought about suddenly and very probably never can be fully realized. However, the great strides made in the last ten or twenty years have brought the matter to the earnest attention of the entire civilized world. It has been shown that the treatment is far more successful in sanatoria designed and conducted for the purpose than in the home or elsewhere. For this reason many sanatoria have been constructed and are now in operation in most of the European countries and in many of the States of this country. Our own State has proved that it is alive to the situation, our physicians fully abreast of the times, and our law-makers inclined to render such assistance in this fight as the State legitimately can.

In 1905 an act was passed by our legislature providing for an appropriation of \$30,000 for the purpose of establishing a State Sanatorium for the care and treatment of persons having tuberculosis. The law provided for the appointment of a board of six trustees whose duty it was to select a suitable location, construct necessary buildings and under the authority of the State conduct a sanatorium. A further appropriation of \$62,000 for additional buildings and land, and \$16,000 for maintenance was passed by our legislature last year, bringing the total appropriations of the State for the purposes of this institution to the sum of \$108,000. Besides these appropria-

tions the sanatorium receives pay for the care of all patients, whether such patients are paid for by the counties of their residence or by the patients themselves. It will thus be seen, as it seems to me, that the State of Michigan has been exceedingly generous in the treatment of this question, involving, as it does, the lives, the health and the happiness of our people.

Under the act of three years ago above referred to Governor Warner appointed the first sanatorium board, and to me has been given the opportunity of telling you what has been accomplished by the State in this movement.

So great was the public interest in the matter that twenty-two towns offered sites for the consideration of the board, every one of which was visited either by the whole board or by some of its members, and several of them were visited a number of times. In the great majority of cases the citizens offered to contribute the whole or a part of the cost of the sites. The one finally selected is about three miles southwest of Howell and consists of 272 acres, 192 of which were given by the citizens of Howell, the purchase money being raised by popular subscription. The other eighty acres were purchased by the board.

The Sanatorium is located just under the summit of the hill, which is said to be the highest point in the lower peninsula of the State, the elevation being about 1100 feet. The soil is a sandy loam and is well adapted for pasturing purposes and for the growing of fruits and vegetables. It is the expectation that the greater part of the milk, eggs and vegetables required for the use of the Sanatorium will be raised on its own land. The site contains three pieces of wood land and has an abundance of springs which furnish an adequate supply of pure water, and all of which empty into a lake of several acres in extent, which is entirely on the Sanatorium grounds, and is well stocked with fish.

The Sanatorium buildings command a magnificent view of the country for approximately twenty miles in every direction. The country is rolling and the view very attractive.

The plan has been to accept only incipient cases, many of whom will be treated each year, and who it is hoped will return to their homes living examples of what can be accomplished in the cure of tuberculosis by proper diet, plenty of fresh air and a correct and healthful manner of living. It is believed that hundreds and thousands of our citizens will be permanently cured, or greatly benefited by treatment at the

sanatorium. But by far the greatest benefit to the people at large will be the educational results from the example and instruction of those who have enjoyed the benefit of a personal residence at the Sanatorium. It may well be taken for granted that all who have had the privilege of "Taking the Cure" under the charge and at least partially at the expense of the State, will be only too glad to render every possible assistance to others afflicted with the dreadful disease from the ravages of which, on account of this help, they have been able to escape.

The plan of the buildings contemplates a main or administration building and a number of so-called shacks, which latter will accommodate from four to sixteen patients each. The Administration building contains the laboratories, staff quarters, dining hall, kitchen, laundry, etc. The main or central part of this building is now nearing completion, the back end, in fact, having been occupied for several months. When completed this building will have two wings to be used as infirmaries, each of which will accommodate ten patients. These infirmaries are necessary for the use of patients requiring special care or nursing. Until the wings are constructed, rooms on the second floor of the Administration building will be used for infirmary purposes.

Three shacks are now completed and two of them occupied, one by male and the other by female patients. Each of these shacks has a large lobby or living room in the center, with ample bath and locker accommodations in the rear. Each of the two shacks now occupied accommodate sixteen patients, both having wings on each side used as wards, and each ward containing eight beds. The third shack, which has just been finished, contains accommodations for eight patients, and a still smaller shack for the accommodation of four patients will soon be ready for occupancy. All of these shacks are of the same general plan, are roomy and well constructed, one side of the wings being practically open but provided with large windows and doors or canvas curtains usually open but which can be closed in case of driving winds or storms. All have wide verandas in front; these verandas in some cases extending nearly around the shacks. Six patients can be accommodated in the main building aside from the wings, appropriation for the construction of which has not been made, so that it will be seen that the buildings already completed, or which will soon be finished, have accommodations for fifty patients, which number will be increased to

seventy when the plans of the board are carried out by the construction of wings on each side of the main building.

At the present time the Sanatorium has twenty patients, fourteen of whom are male and six female, the shack used for female patients having just been opened.

The institution is, therefore, now ready to take care of about twenty more patients, who will be admitted as fast as applications can be passed upon. The first shack has been occupied for about six months and an excellent opportunity afforded for testing the merits of the treatment. Reports to the board of the cases already treated show excellent results, very satisfactory gains having been recorded in almost every case.

It is the belief that in about two and one-half years from the time of the appointment of the Sanatorium Board it will be able to present to the State a practically completed institution as here described.

THE WOMAN'S CLUB IN THE FIGHT AGAINST TUBERCULOSIS.

CAROLINE BARTLETT CRANE,
Kalamazoo.

Mr. Chairman, and Ladies and Gentlemen:— There is an ancient idea, still in fairly good health and reputation, that woman's sphere lies strictly within the precincts of the home; that the whole duty of woman is comprised in the operations of housekeeping and home-making, which include looking after the physical and moral welfare of the family.

But of late years two things have been noticeably happening. First, a great many of the traditional occupations of the housewife have been wooed away from her by men who have annexed them to their own sphere. Our baking and brewing and candlestick making are no longer ours; neither the fashioning of the clothing for husbands and sons, nor, necessarily, for ourselves. Our washer-lady is like as not a man, and a man comes and inserts a pneumatic tube through the window and cleans house for us. We bear the men no grudge for all this; we are rather ashamed that women themselves have not made more definite contributions to the progress of

matters domestic.

But, woman has hereby acquired a vast new leisure which would be highly dangerous to her and to society if she did not at the same time discover new duties to take the place of the lapsed ones. And this brings me to consideration of the second thing, in woman's world, which has been noticeably happening:

Just as these traditional occupations have been escaping from the home into the outside world, so new shapes from the outside world have invaded the home, attacked the home; have, in truth, rendered it impossible for even the most domestic and devoted woman to keep a really clear and wholesome home.

The germ-laden dust from dirty streets invades our homes; impure water, infected milk, diseased beef, bring poison to the best appointed family board; and so on, and so on. And women are beginning everywhere to see these things, and to all suggestions, polite or otherwise, that they should mind their own business and keep in their own sphere, they are gaining courage to answer after the manner of one woman who, when reproached in this fashion for pernicious activity in the interests of pure milk, replied: "Sir, I would have you understand that woman's sphere extends not only outside of the home but inside of the baby."

And now comes this tremendous concerted appeal to all civilized people to stamp out this plague of tuberculosis. And both justly and diplomatically, women are prominently included in this appeal. And I cannot do better than tell you what one great and powerful organization, numbering 800,000 women, is already doing.

The General Federation of Women's Clubs, at its last biennial convention, held in June, 1906, in St. Paul, passed the following resolution:

Whereas, Tuberculosis is the greatest scourge of the human race, causing more deaths than all other communicable diseases combined, except pneumonia; and

Whereas, It is communicable, almost wholly preventable, and often curable; and,

Whereas, It is believed by the concerted action of all the people the scourge can finally be overcome, its preventability and curability depending upon the education of the public; therefore,

Be it resolved, That the General Federation of Women's Clubs make the "Prevention and Cure of Tuberculosis" a subject of study for the next two years, and use every effort to disseminate the knowledge so obtained; and

Be it further resolved, That the officers of each State Federation and of every club co-operate with others in the same line of work in their respective States.

Mrs. R. P. Williams, of Massachusetts, is chairman and leader in this anti-tuberculosis campaign. Her plan, now being actively carried out, includes the appointment by the General Federation of a chairman in each of the forty-six States which shall form a health department for that State, the members of that department consisting of one representative from each club district (corresponding to congressional districts) of the State. Each member shall be chairman of a health department in her own district, and the members of her committee shall consist of the chairman of the department of Civics, Philanthropy and Social Service of the women's clubs of her district.

To quote from the prospectus of the General Federation chairman: "In this way, such general plans for the suppression of tuberculosis as may be applied equally well in every state, may be presented by the chairman of the Health Department, G. F., to the chairman of the health department of the forty-six State Federations, who, in turn, will present them to the chairman of the several State districts, and these latter will bring them to the notice of the chairmen of the local clubs who will appeal directly to the members.

It is recognized, however, that each State (as well as different parts of the same State) has problems peculiar to itself, and while all may co-operate along general lines, residents must study and solve the local problems."

This admirable plan includes many features which the limits of this paper will not permit of my describing, except that I must mention that close co-operation of local clubs with local medical societies and other organizations is a pronounced feature.

And will the women do much practical work towards the suppression of tuberculosis, or is this just a beautiful scheme on paper?

Remember that the club women of the country are credited by politicians with having secured the passage of the pure food law. They are the one most important factor in the campaign against child labor today. The National Forestry Commission is turning to the women's clubs of America as the best hope of saving our fast-vanishing forests. Thus the women's clubs are born to work, achieve work, and—have work thrust upon them—and why not? For to what

purpose are the women of America becoming "the leisure class" except it be a class with "a heart at leisure from itself" to do the work most needed in the world; the work of creating human conditions of life for human beings? And to help destroy the greatest enemy of the race today, tuberculosis, is surely a work to inspire the coldest and dullest mind and heart.

Women are no longer content to take what derelicts of life are tossed to their care, and patch and ameliorate, a little here, a little there. They want to help attack the causes of human misery at their deep foundations, and to do vital, reconstructive work. And doing this they will come full circle back again to the sphere of the home; the home which is indeed to be the battleground of this great war in which men and women must fight always together.

County Society News

Fifth Councilor District.

The annual meeting and banquet of the Fifth Councilor District was held in the Pantlind Hotel in Grand Rapids, on Tuesday, March 3d.

The afternoon session, at which there were some 125 members present, including representatives from every county in the district, was called to order at 2:30 p. m. by our Councilor, Dr. R. H. Spencer. The following program was carried out:

"The Treatment of Joint Tuberculosis," Dr. E. H. Ochsner, Chicago.

Discussion by Drs. Mersen, of Holland; G. L. McBride, of Grand Rapids; S. C. Graves, Wm. Fuller, Ralph Apted, of Grand Rapids, and Dr. Hoag, Ionia.

"The Early Diagnosis and Late Complications in Inflammations of the Bile Tract," Dr. Schuyler C. Graves, Grand Rapids.

Discussion—Dr. Wm. Fuller, Dr. W. L. Barnes, of Ionia; Dr. Brook, of Grandville.

"The Duty of the Profession in Venereal Prophylaxis," Dr. Denslow Lewis, Chicago.

Discussion—Dr. D. G. Cook, Holland; Dr. T. C. Irwin, Grand Rapids; Rev. Wishart, Grand

Rapids, and Dr. J. A. McColl, Grand Rapids.

Dr. Ochsner read a very interesting paper describing his method and the results obtained in the immobilization treatment of tubercular joints.

Dr. Denslow Lewis urged a plan of education of the parents that they might instruct their children, the delivering of lectures on social hygiene to high school classes, the taking up of this subject in our lodges, civic clubs and Sunday noon classes, all of which education would tend to lessen the results that follow the so-called "Black Plague."

The discussion of these papers was free and full and indicated the interest that these subjects aroused in the members present.

At 7:00 p. m., eighty-five members sat down to the banquet table. Two hours were spent in doing justice to the menu that had been prepared and finally, when cigars were lighted, the members were entertained with the following responses to toasts:

Toastmaster—Dr. Collins H. Johnston.

"The Country Doctor," Dr. R. J. Walker, Saugatuck.

"Hard Pills to Take," Mr. S. Wesselius, attorney.

"Heart Murmurs," Dr. F. Lindsley Hoag, Ionia.

"The Clergy and the Medical Profession," Rev. Alfred Wishart, Grand Rapids.

"The Scope of Preventive Medicine," Dr. H. Ostrander, Kalamazoo, State President.

The banquet closed at 11 p. m. with all joining hands and singing "Auld Lang Syne." That the meeting was a success and enjoyed was evident by the general expression of satisfaction by all who were in attendance.

On Monday evening, March 2d, under the auspices of the Kent County Medical Society, a public meeting was held in the auditorium of the Ryerson Library in Grand Rapids.

Dr. Denslow Lewis, of Chicago, delivered an address on the "Present Consistent Public Attitude Towards Social Evils." For over an hour the doctor spoke forcibly and plainly upon this subject, taking for his keynote education of the child, in the home, in the school and in public life. After the address, there was a general discussion, in which clergymen, lawyers, physicians, laymen and some of the ladies took part.

F. C. WARNSHUIS, Sec'y.

Berrien.

The officers of the Berrien County Society for 1908 are: Z. G. Walker, Benton Harbor, president; F. M. Kerry, Benton Harbor, vice-president; W. L. Wilson, St. Joseph, secretary; H. C. Hill, Benton Harbor, treasurer; F. R. Belknap, Benton Harbor, delegate to the Manistee meeting; R. C. Allen, St. Joseph, alternate.

W. L. WILSON, Sec'y.

Grand Traverse.

Dr. M. S. Gregory, of Traverse City, has resigned from the county society and taken a contract with the Order of Foresters. Contract work is not favored by our society.

SARA T. CHASE, Sec'y.

Houghton.

The regular monthly meeting of the Houghton County Society was held at Hancock, on Monday, March 2, 1908.

According to our semi-yearly schedule, the program was to have consisted of two separate papers on "Appendicitis" by Drs. Rodi of Calumet and West of Painsdale. The program committee, however, having gained the consent of these two men to postpone the reading of their papers until May, decided to devote the entire meeting to the anti-tuberculosis question and assume the initiative in the formation of the County Anti-Tuberculosis League to become affiliated with the state branch of the International Congress.

Accordingly, the society sent 150 invitations to representative business and professional men and women of the county, to which about forty responded, despite other exceedingly stronger counter attractions that evening.

Dr. Scott, the president, presiding, stated the object of the meeting and then Dr. Abrams, the Upper Peninsula delegate to the state meeting on tuberculosis, gave a very comprehensive talk on the proceedings of the meeting and re-outlined the object of the meeting. He was followed by several physicians, also ministers, lawyers, business men and women interested in clubs. All were decidedly interested and indicated their willingness and desire to co-operate in any way possible to aid the cause.

A motion was then carried that such a league be formed and Dr. Joy, of Calumet, was elected temporary chairman and Dr. Whitten temporary secretary. Thus the meeting passed from the medical society to the newly formed league.

Officers were then elected, also an executive committee, four or five from each town, including one physician. Dr. Joy was elected vice-president, he being the only physician on the list of officers.

The physicians elected on the executive committee were: W. K. West, Painsdale; R. B. Harkness, Houghton; N. S. McDonald and W. H. Dodge, Hancock; A. I. Lawbaugh, Calumet; P. D. Bourland, Lake Linden; E. T. Abrams, Dollar Bay.

W. D. WHITTEN, Sec'y.

Mason.

At a meeting of the Mason County Medical Society, held in Scottsville, March 17, it was voted to give a picnic for the nurses attending the State Nurses' Convention in Ludington, June 30, July 1 and 2. The picnic will be held on the second of July, the last day of the meeting, at Hamlin Lake, a summer resort, nine miles from the city, and will be under the auspices of the Mason County Society.

E. G. GRAY, Sec'y.

Endorsement of the Work of the Michigan State Medical Board, from Presidential Address of Henry B. Ward, A. B., LL.D., Dean of the Department of Medicine, University of Nebraska, at meeting of Association of American Medical Colleges, Cleveland, Ohio, March 16-17, 1908.

ASSOCIATION ENTRANCE REQUIREMENTS.

"With regard to standard requirements for entrance to medical colleges there is as little agreement as in other matters. In the place of the meaningless expression 'a high school course,' this association was the first to advocate the introduction of further regulations specifying the length and character of such a course. In the working out of this problem our present standard owes much to the splendid work done by the New York Board of Regents in systematizing and formulating the general scheme of public school education. Their results are as applicable to any

other State as they are to the commonwealth for which they were formulated. We are also greatly indebted to the vigorous work of the Michigan State Medical Board. The results of these efforts find expression in the standard minimum entrance requirements of the association. They guard the time element in providing for a full four-year high school course, and protest against cheap work and insufficient training by specifying the fundamental portion of that course.

As pointed out by Dr. Vaughan, of the University of Michigan, Dr. Harison, of Detroit, and Dr. Wheelock, of Albany, this clearly unequivocal and thoroughly pedagogical standard is far in advance of any yet put into effect by any other agency controlling general medical standards. It involves about one year of work more than the general requirement of a high school diploma, at present set forth by various authorities, and is practically in accord with the well-enforced requirement of New York, Michigan and Ohio, which represent the leading influences in regulating medical entrance requirements today, and also those of the American Confederation of Reciprocating, Examining and Licensing Medical Boards."

Correspondence.

To American Physicians Interested in the Alcoholic Problem.

To the Editor:—During 1907 over 200 papers, lectures and pamphlets were published in Europe and America concerning alcoholism and inebriety from a purely scientific point of view. Many of the authors complained that these papers were practically lost because they did not reach medical men interested in the subject. The Scientific Federation Bureau, organized in Boston two years ago, for the purpose of collecting and disseminating the facts concerning the alcoholic problem in connection with the International Bureau of Europe, formed for the same purpose, proposes to secure a list of medical men who are interested in the scientific study of the alcoholic problem. This list will be valuable for authors and students who write on this subject and wish to address a special audience of physicians, not only to increase their interests, but to stimulate more exact studies of the subject. Such a list will enable the Bureau to extend its work of ac-

cumulating papers and reprints of all that is written, and keep authors and readers familiar with what is being done. All physicians who are interested in the scientific study of the alcoholic problem and the research work and studies of medical men at home and abroad on this subject are urged to send their names and addresses so as to be registered and receive copies and abstracts from authors and others who may wish to have their work read by interested persons. As chairman of the board of directors of the Scientific Federation Bureau, I urgently request all physicians interested in this study to send me not only their own names, but lists of medical men who would care to keep in touch with the most important literature coming from the press, and to know the latest conclusions in the scientific world concerning this problem.

Address T. D. Crothers, M. D., Chairman, Hartford, Conn.

News

Dr. Mortimer Willson has been re-elected president of the Port Huron Hospital and Home Association. The hospital recently received a bequest of \$2,000 from the late Charles Baer.

The new addition to the Michigan Hospital for the Insane at Kalamazoo is nearly completed. It will accommodate 100 patients and the necessary attendants, and will be used as a receiving ward for female patients.

The Rockefeller Institute for Medical Research is to award during the coming year a few scholarships of from \$800 to \$1,200 each for work to be carried on in the laboratory of the Institute in New York. They are open to properly qualified men and women, and require the entire time of the holders. Dr. L. Emmett Holt, the secretary, West 55th street, will receive applications not later than April 1, appointments will be announced May 15, and service will begin about October 1.

At a public meeting in Munising, February 6, plans were adopted for a thoroughly equipped general hospital.

Dr. I. H. Neff, Pontiac, has been appointed superintendent of the Massachusetts State Hospital at Foxboro, and took up his new duties April 1st.

An antituberculosis society has been formed at Marshall, of which Dr. Starr K. Church, city health officer, is president. In Muskegon a similar society has been organized with Dr. Frank W. Garber as president.

The long controversy concerning the proposed site of the contagious disease hospital in Detroit has been settled, at least for the present. Judge Brooke has decided that there is no reason for a permanent injunction, restraining the city from building such a hospital in the proposed locality, and the suit is therefore dismissed.

Thirty directors of the State Society for the Study and Prevention of Tuberculosis have been chosen by the committee appointed at the first meeting in Detroit, February 21. The directors, who will meet in Detroit again on March 21 to elect officers and complete the organization, are as follows: Mrs. Caroline Bartlett Crane, Kalamazoo; Mrs. Frances W. Smith, Hastings; Mrs. Huntley Russell, Grand Rapids; Dr. V. C. Vaughan, Ann Arbor; Rev. W. F. Jerome, Hillsdale; Dr. C. H. Johnston, Grand Rapids; Mrs. Louis Blitz, Dr. H. J. Hartz, Dr. C. G. Jennings, Miss Clara E. Dyar, Dr. G. L. Kiefer, Mrs. L. J. Gretter, Mrs. W. J. Chittenden, Jr., Miss Henrietta Morrison, Dr. J. B. Kennedy and David Heineman, Detroit; Dr. A. S. Warthin, Ann Arbor; Dr. J. W. Inches, St. Clair; Dr. E. T. Abrams, Dollar Bay; Dr. George Dock, Ann Arbor; Luke Sugers, Holland; Rev. R. E. Macduff, Jackson; Dr. Herman Ostrander, Kalamazoo; Dr. A. W. Hornbogen, Marquette; Dr. F. W. Shumway, Lansing; Rev. J. P. Sanderson, Lansing; W. A. Comstock, Alpena; Dr. F. W. Garber, Muskegon; Dr. William Delano, Grand Rapids; Dr. Samuel Dickey, Albion.

Dr. Douglas Rothschild, formerly assistant city physician in Detroit, has accepted an appointment as surgeon for the Duluth, South Shore & Atlantic Railway, at Calumet.

Dr. John J. Stoner, of Grand Rapids, charged by Albertus Nyland, acting for the State Medical Board, with a violation of the medical law by improper newspaper advertising, was acquitted by a jury in the superior court.

Dr. Wesley Robbins, a negro physician of 208 Woodward avenue, Detroit, was recently sentenced to three months' imprisonment and a fine of \$300 for using the United States mails to advertise illegal practice.

Dr. J. S. Jackson, of Detroit, has removed to

Alpena, where he has entered into partnership with Dr. H. L. Shupert.

The Minneapolis College of Physicians and Surgeons, the medical department of Hamline University, has been merged into the College of Medicine and Surgery of the University of Minnesota.

Several more colleges of medicine have advanced their requirements for admission. The University of Colorado School of Medicine and the College of Medicine of Syracuse University have announced that beginning in 1910 all applicants must have completed two full years in a college of liberal arts. The College of Physicians and Surgeons of Chicago and the Indiana Medical College will require, beginning in 1910, one full year of college study.

Dr. W. S. Tompkinson, of Kalamazoo, fell and suffered a fracture of the ankle on February 25th.

Marriages

S. M. Kaufman, M. D., Detroit, to Miss Clara Enushensky, of Galt, Ont., January 14.

Charles F. Schram to Maude B. Martin, M. D., of Battle Creek, February 26.

Deaths

Charles Hamilton Morse, M. D., for many years a practitioner of Weymouth, N. S., died at his home in Marquette, February 3, from cerebral hemorrhage, after an illness of five months, aged 70.

Augustus F. F. Ferguson, M. D., died at his home in Lansing, February 23, from valvular heart disease, after an illness of more than a year, aged 60.

Erastus Berry, M. D., of Bellevue, for more than 50 years a practising physician, died early in March, aged 84.

E. H. Lathrop, M. D., the oldest practitioner of homeopathy in Barry County, died on March 7, of Bright's disease, in Hastings, aged 69.

Miar McLaughlin, M. D., of Jackson, died March 3, in Tampa, Fla., where he had gone for his health, aged 68.

Obituary

Dr. Hal C. Wyman died at his home, 42 West Adams avenue, Detroit, at 8:30 o'clock Monday morning, March 9, of pneumonia, after an illness of only five days.

Dr. Wyman was born in Anderson, Ind., March

father, which he continued till 1879, when he removed permanently to Detroit. It was soon after this that he became affiliated with the Detroit College of Medicine, in the department of physiology. His ability and personality won attention and respect at once, but when friction in the faculty developed, he, with others, resigned. He then founded the Emergency Hospital and the Michigan College of Medicine and Surgery, of which he was always president.



Dr. Hal C. Wyman

22, 1852, the son of Dr. Henry Wyman and Zelinda Carpenter Wyman. At the age of 12 he removed with his family to Blissfield, Lenawee county, whence he was sent to the Michigan Agricultural College. At the age of 17 he commenced the study of medicine with his father and a year later entered the medical department of the University at Ann Arbor. He graduated in 1873, continued his studies abroad during the following year, and on his return took up practice with his

Dr. Wyman was twice married, first to Mrs. Thompson, of Adrian, who died several years ago, and in 1906 to Miss Lulu Weeks, of Detroit, who survives him. He had three daughters by his first wife, but they all died before the mother. He was a member of the Masonic order, of the Sons of the American Revolution, of the Detroit Club, and the Detroit Boat Club. He served twice on the state board of corrections and charities, with an activity that was characteristic of

the man. He had always numerous interests outside of his profession, among which were the study of history, literature, and the maintenance of his large farm near Gibraltar on Lake Erie.

In the medical profession of the city and state he has for many years been a conspicuous figure, and indeed he was considerably known beyond the limits of Michigan. He was a member of the County Society, and in 1891 its president, and the same year was a vice-president of the American Medical Association; he was also a member of the Northern Tri-State and the Michigan Surgical and Pathological Societies.

Dr. Wyman's whole life was marked by industry; he had a large practice, including many poor, to whom he gave his services liberally. He was a constant reader, not only in medicine, but in those outside subjects that claimed his interest; he contributed numerous medical writings to current journals, and was a frequent speaker at medical meetings. He was a good organizer and executive, as attested by the hospital and school which he established. A man of unquestioned ability, he possessed also an immense personal magnetism which helped largely in his success. He was always genial, never criticised harshly, never failed to give valuable counsel to younger men who sought it. He had a fine physical presence, which lent great force to his natural facility in speaking; he was never at a loss for apt remarks, no matter how extemporaneous, and he could invariably draw from his own rich experience for happy illustrations.

Such, in brief, was the career and the character of a physician who will be sincerely mourned and whose place can with difficulty be filled.

Resolutions Adopted by the Detroit Academy of Medicine upon the Death of Dr. H. C. Wyman.

Whereas, an all-wise Providence has removed from our midst our co-worker and brother practitioner, Dr. Hal. C. Wyman, and

Whereas, Dr. Wyman was an active member of the Detroit Academy of Medicine for the period of 28 years, during which time he contributed many valuable papers pertaining to scientific subjects, medicine, historic research and current events of interest to his beloved profession.

In his work and writings Dr. Wyman drew from a large fund of general and special knowledge, obtained from study, observation and travel,

giving his opinions at once special value to his patients, and the respect and confidence of his confreres. A strong trait in Dr. Wyman's character was industry and application, hence the practice of the arduous duties of his profession drew largely upon his physical endurance, but found him responsive to the last, and he died, as he had lived, rendering services to his fellows.

The Detroit Academy of Medicine will miss his genial presence and his wise counsel, as will his hosts of friends and patients; with them, we express our deep sorrow at his untimely passing from us;

Therefore, be it resolved, that the Detroit Academy of Medicine feels deeply the loss of our esteemed brother and extends to his family and friends our heartfelt sympathy in their affliction; that a copy of these resolutions be forwarded to the family, the public press and the medical press, and be it further resolved that these resolutions be spread upon the records of this Society.

L. E. MAIRE,

LEARTUS CONNOR,

JAMES A. WINTER,

Committee.

One is wise in making assurance doubly sure by tying each fascial suture with three knots instead of two.—*American Journal of Surgery.*

The tension on the sutures after an operation for epigastric hernia may be relieved by placing a pillow under the knees and propping the patient up in bed.—*American Journal of Surgery.*

One should watch carefully for overdilatation of the bladder in all cases of lesions of the spinal cord. In children the bladder has been known to distend sufficiently to hold 20-40 ounces.—*American Journal of Surgery.*

In the case of a urethro-vaginal fistula, the vaginal opening can readily be discovered by the injection of methylene blue into the bladder and noting its escape through the vagina. If, however, the opening communicates with the ureter, the blue fluid cannot be seen. In such a case, a catheter at times can be passed directly from the vaginal opening into the ureter.—*American Journal of Surgery.*

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Trichomonas Hominis Intestinalis.—FREUND reviews quite exhaustively the literature regarding this parasite, and adds some important new, personal observations regarding its biologic characteristics, made in the course of careful study of ten cases in Dock's clinic. Of these ten cases there were several in which the trichomonas infection was undoubtedly of secondary importance, as, for example, two of pernicious anemia and one of typhoid fever. In the majority, however, it would seem to have been the chief etiologic factor, and in all there were symptoms obviously attributable to it, and similar to those reported by other observers. The most important of these are: severe abdominal pain at the onset, often colicky in character, radiating from side to side, and more or less constant, being relieved when at its height by nothing but opium; and diarrhea, not necessarily very frequent; but the stools are nearly always unformed or fluid, usually yellowish brown and invariably alkaline. Anemia and loss of weight are common. Calomel in small regular doses, seemed to be the most efficient drug for destroying the organisms, and after its administration for a time the diarrhea and pain usually cease, and the patient recovers. The method of entrance of the parasite is probably through the ingestion of spores with food and drink. The commonest site of infection and ulcerative lesions is the first part of the colon, though the small intestine can often be shown to contain great numbers of trichomonads. The intestinal changes are probably caused by toxins. The organism is short-lived outside of the body, and quickly destroyed by heat and dessication, so that for its detection the examination of fresh stools on the warmed stage, or a special staining technic is necessary.—*Archives of Int. Med.* Vol. 1 No. 1.

Pulse and Blood Pressure Changes in Aortic Insufficiency.—STEWART studied the changes in the arterial blood pressure and the ventricular volume and pressure in dogs in which aortic insufficiency had been artificially produced, his object being to discover some more satisfactory explanation of the pulse peculiarities than the obviously incorrect one of regurgitation. His paper, illustrated with numerous tracings, indicates careful and accurate work. He summarizes his chief conclusions as follows:

1. The work of Henderson is confirmed in that the cardiac cycle is not diphasic but triphasic, and consists of systole, diastole, and diastasis, or the period of rest.

2. The production of aortic insufficiency in the dog increases the systolic output of blood by only a fraction of a cubic centimeter.

3. The volume of blood which regurgitates is negligible.

4. The transmission of pressure (from the aorta) to the ventricle increases the ventricular tonus.

5. It also produces a reflex inhibition of the vaso-motor center.

6. The fall of pressure in aortic insufficiency is due to the diminished peripheral resistance thus induced, and is not caused by loss of blood from regurgitation.

7. The increase of pulse pressure—the difference between maximum and minimum pressure—is due to a lowering of the diastolic pressure. There is no increase in the systolic pressure.

8. The main fall in pressure is systolic in time, and is due to an increased blood flow through the capillaries.

9. So long as the tonus of the ventricle is maintained, a slowing of the heart rate does not favor increased regurgitation.—*Arch. of Int. Med.*, Vol. 1, No. 1.

Blood Cultures in the Diagnosis of Typhoid Fever.—PEABODY has applied a simplified method to the study of a series of cases at the Massachusetts General Hospital. He uses test-tubes containing 5 c. c. of fresh oxgall, sterilized in the autoclave, and takes the blood from the patient's ear, to avoid the complicated procedure and disturbance of the patient involved in taking it from a vein. The lobe is pierced with a small lancet pointed knife, and by careful manipulation 1 to 2 c. c. can be made to run into the tube. Not more than 2.5 c. c. should be added to 5 c. c. of gall. The mixture is incubated for 15 hours. At the end of this period several loops are transferred to blood serum, and after 3 to 5 hours' incubation of this culture, motile-organisms may be found in the water of condensation. A transfer is made from this to agar for a stock culture. Possible contamination by the staphylococcus is usually overcome by the more rapid growth of the typhoid bacillus. Cultures were made from 33 cases in which the diagnosis of typhoid was made either by the Widal reaction or by positive culture; 60% of the cases in the first week of the disease gave the agglutination test, and 100% positive cultures; of those in the second week 73.6% agglutinated, and 78.9% gave positive cultures; of those in the third and fourth weeks 77.7% agglutinated, and 44.4% gave positive cultures. In 27.2% of the total number, the positive culture preceded the agglutination reaction by from 3 to 7 days. In one case agglutination was never obtained. In one case positive cultures were obtained on admission and again during a relapse, while during the afebrile period and at the beginning of the relapse the cultures were negative. Peabody considers the process a simple and valuable one for early diagnosis.—*Archives of Int. Med.* Vol. 1, No. 2.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Early Recognition of Uterine Cancer.—An address delivered by Chipman before the Canadian Nurses' Association contains such excellent advice, put in such an excellent form, that it is worthy of quotation:

"What I wish specially to mention to you tonight is the question of uterine cancer, making special reference to its early recognition. By what signs does it first make itself evident? It is these signs that I wish to impress upon you, for it is in your hands often that the responsibility rests. The woman confides in you more readily oftentimes, and naturally so, than in her physician. First, let me make a general statement, which I wish you always to keep in mind, and it is this: Any woman who has passed the change of life—by that I mean where her normal menstruation has for some months or years ceased, and who informs you that the menstruation has returned (she often laughingly, or almost boastingly, informs you of this fact, claiming that she has renewed her youth, that she is becoming young again)—I say, anyone who informs you of a blood-loss from the vagina after a period of amenorrhea, at the time of the menopause, treat it as a very serious matter. Question her closely, and if a recurrence of hemorrhage should take place, simply insist that she seek the advice of her physician. By doing this only will you be doing your duty. By doing this you will save lives.

"I wish, then, to draw your attention to three chief signs of early uterine cancer. I am speaking now of women who are at or past the climacteric. For it is at that time that cancer is most likely to manifest itself. The most suspicious sign is, as I have intimated, hemorrhage—irregular hemorrhage, often small in amount, often bright red and occurring irregularly. Let this sign make you always very suspicious. Let this sign make

you always insist that a careful vaginal examination be made by the woman's physician.

"The next most important early sign is a leucorrhea. By that I mean any discharge other than blood. Frequently it is thin, watery, meat-watery, as it is called, being slightly blood-stained. Sometimes it is brownish, and sometimes yellow. Any persistence of such discharges in a woman, especially after the menopause, should make you again suspicious of the presence of early cancer.

"The third sign, and the least important, is pain. Unfortunately, when the woman begins to complain of pain the condition is usually past surgical help.

"So I do not ask you to rely at all upon the symptom of pain. Do not wait for it. Hold in your minds the two signs that I have spoken of: hemorrhages, irregular hemorrhages, and persistent leucorrheal discharges. Whenever in your practice you meet women who speak to you of these things, treat the condition as being possibly very serious, and insist that they seek medical advice."—*Canadian Practitioner*—March, 1908.

Decapsulation of the Kidney in Eclampsia.

FRANCK reports one case of decapsulation for eclampsia and reviews nine other cases from the literature. In these 10 cases, the operation was followed by rapid recovery in 6; 2 patients were unimproved; 2 patients showed some improvement, although it was not marked. In 8 cases the delivery had preceded the operation, including one in which there was no improvement. Even though a mortality of 30% follows the operation when done for eclampsia, this is so much better than the mortality of seven cases of eclampsia, without operation, that FRANCK recommends the procedure in all severe cases.—*Munch. med. Woch.* Dec. 10, 1907.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Cardiac Failure in Pneumonia.—In acute pneumonia, the second cardiac sound over the pulmonary artery is frequently found to be accentuated. This sign is a valuable one, and gives the practitioner an indication as to the condition of the pulmonary circulation. The pulmonary second sound becomes very much less distinct when the right auricle and ventricle become distended, and the right ventricle is unable to completely empty itself. As the right side of the heart becomes engorged, there is usually found to be an increase of the cardiac dullness to the right of the sternum. "With gradual heart weakness and signs of dilatation, the long pause is greatly shortened, the sounds approach each other in tone, and have a foetal character (embryo-cardia)." Occasionally, as early as the third day in a case of acute lobar pneumonia, there may be a sudden and early collapse of the heart, the pulse becomes rapid and feeble, and there is an increasing cyanosis. For this cardiac failure in acute pneumonia, the immediate exhibition of heart stimulants is indicated. Administration by mouth should not be resorted to, but hyperdermic of strychnine or intravenous injections of tincture of digitalis or a hypodermic of ether should be given at once.

In some cases, the cardiac failure is due to the paralysis of the vaso-motor center, which is situated in the lower part of the floor of the fourth ventricle, and there is consequently a general fall of arterial blood pressure; this is due chiefly to the action of the toxin upon the nerve centres. In this condition, the pulse becomes soft and easily compressible, the facies gray, the hands and feet cold, the skin bathed in a cold sweat, and there is a progressive prostration.—*Practitioner*, London, March, 1908.

Calcium Chloride in Albuminuria.—RENON, in an address before the Therapeutic Society of Paris, recommends the use of Calcium Chloride as a supplementary measure to rest and diet in the treatment of albuminuria. He recommends beginning with $1\frac{1}{2}$ grs. per day and gradually increasing the dosage. The method may be persisted in for some time. He reports some excellent results with this method.—*Semaine Medical*, November, 1907.

The Treatment of Uremia.—OSBORNE SUMS

up the treatment of uremia as follows: Absolute muscular rest. Food must be withheld even to the giving of milk. Very little water, if any, should be administered by mouth even if there is no edema. Frequent colon irrigations of hot water may be given, especially if the blood pressure is secondarily low. He recommends the administration of thyroid. Hot sponging of the skin may be considered a routine measure. The author thinks that venesection in most cases will remove more toxins from the blood than eight or nine times the amount of water eliminated through feces or perspiration. Nitro-glycerine is recommended in high tension cases. When the uremic period is passed and the kidneys begin again to secrete and excrete the diet and life of the patient becomes of primary importance.—*Journal of the American Medical Association*, Aug. 24, 1907.

The Craving for Sweets in Diabetic Patients.

ROPPERGER says that while the loss of calories resulting from the exclusion of sugar from the diet of diabetes can easily be replaced, still the patient craves sweets, and he notes the recent recognition of the nutritive value of sugar. The only safe substitute is saccharin, and the author's paper is largely devoted to a consideration of this substance. He reviews the literature of the question and declares that the restrictions placed on its use in continental countries have been instituted by the cane and beet sugar growers who look to their own revenue. Saccharin has no nutritive value, and clinical experience appears to show that its use as a condiment is attended with no deleterious effects. It will prevent fermentation, but there are other preferable remedies for this object. It does not in any sense cure diabetes. It only satisfies, and that in a perfectly safe way, the craving for sweets. It should not be used in such large doses as to cause repugnance and nausea. Out of twenty-six replies to a circular letter sent out by the author to various physicians twenty-two stated that the respective writers considered saccharin a harmless addition to foods and beverages. One writer was doubtful about the matter and three failed to express any opinion on the matter. The average dose seems to have been about three grains three times daily.—*New York Medical Journal*, July 13, 1907.

PATHOLOGY AND BACTERIOLOGY

Conducted by

C. S. OAKMAN, M. D.

Splenomegaly and Banti's Disease, with Report of a Case.—J. P. SIMONDS summarizes 33 cases of Banti's Disease from the literature, and describes in detail a case in the Presbyterian Hospital of Chicago, including clinical observations, hematology, and autopsy findings. He concludes that "there are two distinct conditions associated with idiopathic anemia and enlargement of the spleen. One begins usually in patients over twenty years of age; is characterized by chloro-anemia, leucopenia, enlargement of the spleen, and quite frequently by gastro-intestinal hemorrhages, ascites, pigmentation of the skin, very rarely by jaundice; and anatomically shows fibrous hyperplasia of the spleen with, frequently, cirrhosis of the liver, and varicose veins in the lower esophagus and oardia. The other occurs most often in young people and shows a family tendency; manifests itself clinically by an anemia with low color index, absence of leucocytosis, enlargement of the spleen, a prolonged course, hemorrhages from the nose and gums or under the skin and mucous membranes, and, less frequently, by jaundice and brownish pigmentation of the skin; and is characterized anatomically by diffuse proliferation of endothelium in the spleen and sometimes in the liver and retroperitoneal lymph glands."—*Journ. of the Infectious Diseases*, Jan. 30, '08.

Comparative Studies of Spirochetes.—With a view to showing that *Spirocheta pallida* can be well differentiated from other spirochetæ, P. MUHLENS describes all known varieties. Preparations of the *Sp. pallida* are stained by the Giemsa and the Levaditi method. Its chief characteristics are: length, 4-20 microns, thickness $\frac{1}{4}$ micron; ends pointed, with often a flagellate continuation, which is demonstrable with Löffler's stain; living forms are weakly refractile; spirals, 6-20, regular, short, deep, retaining the form in motion, also in fresh preparations after death; length of spiral 1-2 microns, depth $\frac{2}{3}$ micron; limit of motion not large, rotation around its long axis, forward and backward movement, and bending of whole structure; stains with difficulty, negative to Gram's method, bright red with Giemsa's stain, ends very pointed; regular, abrupt, corkscrew spirals, which occur most similarly in *Sp. pallidula s. pertenuis*, in tropical Framboesia. In poor smears, either because of degeneration or development, we find forms varying from the usual type.

The *Sp. refringens* is longer and noticeably thicker than the *Sp. pallida*; living forms are strongly refractile, with 3 to 15 irregular, broad, flat, spirals, which alter in motion; active motility, better staining qualities, easily taking Giemsa's stain and blue or violet, negative to Gram.

The *Sp. balanitidis* is considered by the author as identical with the *refringens* and not pathogenic.

The *Sp. Duttoni* of African relapsing fever has 3 to 12 uneven, broad, often very deep, but widely undulating spirals, and stains readily blue or violet by Giemsa, although sometimes certain portions remain unstained.

The *Sp. Obermeieri* of European relapsing fever much resembles the previous named variety, as well as the *Sp. gallinarum* and *Sp. anserina*.

The author considers the *Spirochetae* to be protozoa.—*Zeitscher. f. Hygiene u. Infektionskrankheiten*, Bd. 57, 1907, H. 3, p. 405.

Fibromyomata Uteri. A Study of the Degenerations, Complications, and Associate Conditions in Three Thousand Five Hundred and Sixty-one Cases.—STEPHEN E. TRACY

reaches the following conclusions: 1. That a large percentage of fibromyomata uteri undergo some form of degeneration, but that the majority, 64.9 per cent, of degenerations take place in women who are forty or more than forty years of age, or, in other words, after the menopause. 2. That fibromyomata uteri and visceral degenerations are found associated in a large number of cases. 3. That young women who are anxious for maternity and possess small tumors which are causing no symptoms, need not be subjected to operation, but should be instructed to report for examination as soon as symptoms develop. 4. That all fibromyomata uteri which produce symptoms, regardless of the age of the patient, and all fibromyomata uteri in women forty or more than forty years of age, should be removed when diagnosed, because the mortality following operation, below 5 per cent, is less than the risk of carrying the tumor, as from 12 to 14 per cent of these patients would die if not subjected to operation. 5. That a supravaginal hysterectomy is the operation of election because of the ease and rapidity of its execution, and last, but not least, because it is followed by the lowest mortality and should be performed in all cases where a myomectomy is not indicated and where a panhysterectomy is not demanded. 6. That many of the associate conditions would cause death if the patients were not subjected to operation, but the mortality in these cases should not be added to the estimated mortality of fibromyomata uteri as they are independent lesions, and are in no way connected with the tumor except that the conditions coexist. 7. That a thorough pathological study should be made of all fibromyomata uteri which are removed, because of the malignant changes and the degenerations which take place in these tumors.—*Surgery, Gynecology, and Obstetrics*, March, '08.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

Inherited Syphilis.—In the opening address before the Society for the Study of Diseases in Children, November 13th, 1907, R. CLEMENT LUCAS makes the following suggestive remarks:

The cause of syphilis, whether inherited or acquired, is the presence in the blood and tissues of the same organism, *spirochaeta pallida*, which can be demonstrated in the various secondary lesions, in the blood, and in the internal organs.

The discovery of the cause necessitates the rearrangement of our former views as to the transmission. Inheritance from the father alone is now put out of count, and it follows that infection of a mother by her syphilitic fetus can never occur. Inheritance is invariably through the syphilised mother.

It would seem that when virulent, the spirochaetes penetrate the chorion or placenta and occasion miscarriage, macerated fetuses, or premature births; but when the virus is attenuated by time or treatment the placenta forms a complete protection to the developing fetus, and it is the separation of the placenta at birth which allows the infection to take place through the umbilical vein. Hence the regularity of the secondary exanthematous stage from a fortnight to three months after birth. In these cases the separation of the placenta is the first stage, and corresponds to the chancre of acquired syphilis.

Hitherto Colles' law has been used as an argument in support of the view that the mother may get a mild form of syphilis from her syphilitic fetus, whose syphilis is supposed to be derived entirely from the father. But the law of immunity will remain equally true if it is to be supposed that the mother is first inoculated by the father, a large dose of protozoon causing an obvious eruptive syphilis and a small dose a syphilis which misses the eruptive stage.

Syphilis in a man is generally admitted to be capable of transmission to a succeeding generation for a much shorter time than syphilis in a woman, and this supports the view, viz: that for transmission it is necessary that the woman be first infected.

The question whether the milk of a syphilitic female may infect a healthy infant at the breast has been much discussed. If Voss's experiment is to be trusted, milk has been directly inoculated, but the milk of a syphilitic woman, when received into the alimentary tract of an infant, need not convey any infection to the child.

It is obvious, as the greater cannot be included in the less, that a spirochaeta cannot be carried in a spermatozoon, but this does not exclude the possibility of the spirochaetae being conveyed by the fluid part of the semen.

Transmission to the third generation is another question open to discussion. If the tertiary symptoms, occurring ten or twenty years after inoculation, can be proved to be due to renewed activity of the spirochaetae in certain situations, there seems to be a fair possibility of their being carried to the third generation. In this connection LUCAS mentions a case where the parents were syphilitic and their infant showed no symptoms of inherited syphilis while under observation.

There is probably no disease responsible for such an enormous destruction of life in its earliest stages as that caused by syphilitic parentage. This mortality is greater in those families where both parents have suffered from chancre syphilis and obvious secondaries. The severity of the infection and ineffective treatment or lack of treatment are the two factors which determine the mortality.

In conclusion he emphasizes the importance of weighing carefully all the evidence before determining that a particular affection is due to inherited syphilis. Every deformity from a dislocated hip to cleft palate, all defects such as hernia, infantile paralysis of various kinds and even naevi have been described as dependent on inherited syphilis, and as if better to cover the anomalies, the term "parasymphilis" has been invented to add to the confusion.

We do not deny that persons whose constitutions have been weakened by disease are liable to produce degenerates in succeeding generations; but in future the most certain test of the disease being syphilis will be the presence of the *Spirochaeta pallida* in the part affected.

The organism has an extraordinary persistency producing local symptoms after lengthened periods, but happily we have in mercury and the iodides drugs which control its development and bring about its destruction. Metchnikoff has recently shown that sometimes, after direct inoculation, the application of a calomel ointment to the sore is sufficient to kill the organism and prevent of the occurrence of secondary symptoms.

—*British Journal of Children's Diseases*, Jan. 1908, p. 1.

ORTHOPEDIC SURGERY.

Conducted by

W. E. BLODGETT, M. D.

Concerning the Etiology and Treatment of Congenital Talipes Calcaneo-Valgus.—STERN reports twenty-three cases and comes to the following conclusions:

First. Besides the recognized changes in the form and position of the foot, one of the leading characteristics of congenital talipes calcaneo-valgus is the muscle unbalance consisting in passive contractures in the dorsal flexors and peronei muscles and overstretching, lengthening, relaxation and atrophy of the plantar flexors and supinators and tendo Achilles.

Second. These muscle changes are not dependent upon changes in the central nervous system but are due to forced position of the foot within the uterus in pronation, abduction and dorsal flexion.

Third. This forced position is due to an abnormal intrauterine pressure usually coming from a partial lack of liquor amnii.

Fourth. All cases should be treated as early as possible by means of overcorrection and fixation.

Fifth. Both the type of the muscle unbalance and the results from such static treatment are additional proof of the pressure theory.—*Am. Jour. of Orthopedic Surg.*, Vol. V., No. 3, p. 276.

Acute Osteomyelitis of the Shaft of the Humerus—Removal of the Shaft—Complete Reproduction of the Bone.—SCUDDER reports a case of a girl 13 years old with virulent infection of the humerus by the staphylococcus pyogenes aureus. The condition, before being seen by SCUDDER, was supposed to be acute rheumatism of the shoulder, which had been painful, tender and swollen for two weeks. Incision through the deltoid liberated pus, and discovered the humeral shaft bared of periosteum for two or three inches. The cortex was removed till normal medulla appeared. The medulla was undisturbed by instruments, and was only washed with salt solution. Four days later, a similar procedure and drainage was required at the lower end of the humerus. A succession of radiographs, which are reproduced in the article, showed a progressive periosteal proliferation and indicated the time for the removal of the necrotic shaft, ten weeks after the onset of the infection. By this time the periosteal layer was thick and resistant as a thick egg shell and was saturated together after removal of the dead shaft by interrupted catgut. Buckling of the periosteal skeleton of the humerus was prevented by an internal angular splint and suspension of the arm to an overhead cradle, thus making traction on up-

per arm. Four weeks later the necrotic humeral head was removed. One year and four months after the first symptoms, the arm is useful and strong. The new shaft of the humerus, as shown by X-ray, is sound and nearly completely straight. Motion in shoulder and elbow is much restricted. Forearm practically normal. The life was saved by the early operation; a part of the function of the arm was saved by avoidance of needless damage in the first operation, and by removal of the sequestrum (shaft) at the opportune time, with suture, splinting and traction of the proliferating periosteum. Life in the open air and sunshine, from the moment of the first operation, hastened convalescence from the infection.—*Surgery, Gynecology and Obstetrics*, Feb., '08, Vi. 2, p. 169.

Observations on the Treatment of Fracture of the Neck of the Femur in 112 Cases.—

WALKER finds that of 112 cases treated by the old method in Bellevue Hospital, New York, 18 died; 32 have not been found; 30 are unable to work because of persistent impairment of function through pain; through restriction of movement at the hip on account of shortening and abduction; through the necessity of dependence upon crutches. Twenty-two show improvement. Twelve have abandoned their crutches and are walking comfortably with a cane, but at times with some stiffness and occasional pain. They are beginning to do some work. Ten have recovered almost completely; they are free from pain and stiffness, and are able to do their normal work. Ten are still in the hospital.

In view of these unsatisfactory results under old methods, Walker advocates the method advised by Royal Whitman. This method consists of abduction to forty-five degrees, correction of the external rotation, and strong traction; under general anesthesia; the thigh in this position is put up in a plaster spica. Impaction, if present, is gently broken up. The author has treated four cases in this way. The cases were all fresh, not more than five days old; were allowed out of bed at the end of four weeks; plaster completely removed at end of eight weeks; allowed to bear weight on injured limb in from two to four months, crutches being used meantime; canes used after this time; at end of nine months all were doing their work without artificial support of any kind; at end of a year or more, the shortening varied from none to less than one-half inch, and abduction and flexion were normal in all the cases.—*Annals of Surg.*, Vol. XLVII, Jan., '08,

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Original Articles

OBSTETRICAL SERVICE FOR THE LABORING CLASSES, AND THE RELATION OF THE MIDWIFE TO IT IN THIS STATE.*

CLARA M. DAVIS, A. B., M. D.,
Lansing.

There is a permanency inherent in obstetrics not found in all of the other branches of medicine. We are eagerly engaged, for instance, in educating, legislating and sanitating tuberculosis and other infectious diseases out of existence and in our own time some will doubtless become, as have cholera and yellow fever, chiefly of sanitary and historical interest. But obstetrical cases we shall have always with us, a constant feature of the medical situation. Every advancement in obstetric therapeutics is a permanent gain, every change in obstetric economics, a question of interest to the general practitioner.

Sociologically, this practice is important in that it concerns not only the coming generation, but a class of women of great importance to the State, i. e., in the prime of life,—upon whose life and health depend the health and integrity of families, and who, in their capacities as wives and mothers, are of vastly more importance in the social fabric than the whole army of women in business and the professions.

Of obstetric patients, by far the largest number are found and the birth rate is the highest, not among the well-to-do, but among people of small means, especially of the unskilled laboring classes, in families always so near the verge of dependence that disability or death of either wife or husband may push them over.

Loss of life or disability from unskilled attendance of confinements, puerperal complications or sequelae, also ophthalmic troubles and uncorrected deformities in the children, bear most heavily upon this class, and since they cannot afford trained nursing, their special need for the best obstetric service the physician can furnish, is apparent.

How is it from the standpoint of the physician? Three developments in modern medical science have left their impress on obstetrics, raising the standard of service to be given, viz., the development, first, of the general principles of surgery, second, the science of hygiene and sanitation, with its emphasis on the duty to prevent diseases and complications; and that of the science of pediatrics.

*Read at the Saginaw meeting of the Michigan State Medical Society, May 15, 16, 1907, and approved for publication by the Publication Committee.

That service in accord with these principles, including proper examinations and care of pregnancy, repair of the injuries of labor, and careful oversight of both mother and child during the puerperium can be given for the fee of ten dollars, which I believe is the usual fee for this class of obstetric patients, at anything like a profit to a physician is open to grave doubt. Certainly, it cannot be for less. The unprofitableness of furnishing the service which each true physician would like to give is to some extent accountable, not only for the poor service sometimes given by good physicians, but for the tendency to allow this class of practice to drift largely into the hands of two more or less undesirable classes of obstetric practitioners.

1. The out-and-out cut-rate man to whom medicine is a business, not a profession, and who frequently reaches this class by advertisements in the papers printed in the different foreign languages—

2. Midwives.

The hospital, general or lying-in, which numbers its obstetric cases by ten thousands, does not in this State care for this particular class of obstetric patients to any appreciable extent. In Detroit, although no accurate count was made of birth certificates returned from hospitals, a probably fair estimate of them would be about five per cent of the entire number. These represent chiefly, however, not births of the laboring classes, but illegitimate births, and births among the comparatively well-to-do, who choose to avail themselves of the excellent hospital accommodations.

I am not aware of how recently the matter of midwives has been discussed by you, but it seems to me worthy of attention because of conditions existing at the present time and because of re-

cent legislation in neighboring states. The midwife in this country, as you know, is neither a survival nor a new development. Her occurrence is merely coincident with that of a foreign laboring population which in Europe has for centuries been accustomed to employ her, and in so doing to have the assurance of her proficiency given by State regulation. Hence the number of midwives will not tend to decrease while the foreign population of the State is increasing, as it is with the increasing industrial developments of the State. In fact, if we may judge from the experience of the older States, as New York and Ohio, their number will increase.

Since the new law for registration of births went into effect, it has been possible to get much more reliable information as to the extent of practice and the number of midwives than ever before, although it may still be doubted whether all the midwives of the State have been reached by the officials, and whether, when reached, they are as a class as conscientious in the matter of reporting births, especially illegitimate and still births, as are physicians. For example, letters from physicians in several different counties in the State stated that there were midwives practicing in their vicinity, where examination of the birth certificates from those localities failed to show one signed by any one except a physician or father. Also the latest Detroit Directory showed in the classified list of midwives the names of several whose names did not appear on birth certificates.

Through the courtesy of Mr. W. F. Petrie, Chief of the Division of Vital Statistics of the Department of State, the writer was allowed to examine the eleven thousand nine hundred and eighty-seven birth certificates returned in January, February and April of this year and covering respectively the preceding months. Of these, fourteen hun-

dred and fifty-five, or 12.23 per cent, were returned by women either signing themselves as midwives or who, from the fact of their turning in more than one certificate in these months, were evidently acting as midwives. Aside from these, about two hundred certificates were signed by women as grandmothers, nurses, neighbors, friends, or without designation, and a somewhat larger number (no complete count of these was made) were signed by fathers. These last were more numerous in counties that returned a number of certificates signed by midwives.

The results of the examinations from several cities and counties with variously high percentages of foreign born populations, viz., Detroit, Grand Rapids, and Ishpeming, of cities; Gogebic, Chippewa, Cheboygan, Clare, Saginaw and Gladwin of counties, showing the state of affairs where foreigners form one-fifth or more of the population, were as follows:

Cities.	Foreign born Population.	No. of Birth Certificates for three months.	Signed by Midwives.
Detroit	51 %	2082	512, or 24.6%
Grand Rapids.37 %		537	88, or 16.5%
Ishpeming	81.9%	112	24, or 21 %
Total		2731	624 or 23 %
	18.3%		
	24.8%		
	23 %		
Counties.	28.10%		
	18.6%	784	225, or 28 %
	49.3%		
Cities & Co.'s. . .		3515	849, or 24.33%

That is, the annual rate of births attended by midwives in these localities is 3,400. Dickinson, Manistee, Bay, and other Upper Peninsular and Northern counties were equally large in percentage of returns signed by midwives. The Central and Southern counties, as Branch, Barry, Clinton, Cass, Eaton,

Ingham, Jackson and Kalamazoo, with a foreign-born population of only 10%, showed almost no birth certificates signed by midwives.

But the question may be raised, "Do these women signing birth certificates as midwives take full charge of obstetrical cases, or are they mere obstetrical nurses?" In Detroit, calls were made by the writer on twenty out of the forty whose names and addresses appeared on birth certificates (the selection being entirely a matter of geographical convenience), and in each case the midwife, or some person in the home with whom orders for the services could be left, was seen. All but two had signs in front of their houses, usually in two or three languages, advertising themselves as midwives. All, without exception, claimed to take complete charge of normal obstetrical cases without a physician.

From Grand Rapids, I received trustworthy information to the effect that genuine midwives were practicing there, and replies to letters of inquiry sent out to a number of physicians in Northern and Upper Peninsular counties, gave the same information. From Benzie County, Dr. Ellis reported that an active society had gotten rid of them, and from Calumet it was reported that most of the so-called midwives called in a doctor, so were merely obstetric nurses. Just why in such cases the midwives sign birth certificates, and 23 per cent* from Houghton county are so signed, I am unable to state; but for the above reason Houghton county was not included in the figures given.

In the lumber regions, and in the newer and less prosperous farming communities, where a number of certificates are signed by midwives, there seems to

The per cent for Houghton Co. was incorrectly stated at the Saginaw meeting. The correct figures are: Total birth certificates for the three months, 567. Signed by midwives, 133.

be a different condition existing from that in the cities and in the mining regions, in that a relatively large number of women sign birth certificates as midwives and turn in respectively but one or two in the three months examined. The natural inferences are that these are not professional midwives, making their living by their practice, and as in many of the cities, trained in foreign hospitals, but are women who, with a little experience, do this service for friends, relatives or neighbors. That their obstetrical service is of any higher order than that of the professional foreign midwife, is, I think, very doubtful.

The fees charged varied from three dollars for very poor people to ten dollars. The usual fee in all localities was five dollars. This included, however, with all but one of those I saw, daily visits to the patients for eight days, at which mother's bed was made, infant bathed, etc., so that for one small fee they received, after a fashion, the combined services of a physician and nurse. This custom of daily case-to-case visits shows also the need for asepsis on their part. It will be seen at once that anything like competition on a commercial basis between physician and midwife cannot exist. Even these small fees, however, given to women turning in ten to fifteen and in one instance as high as thirty-eight to forty birth certificates a month, furnish a larger income than they could gain in other ways: a fact the writer considers is not unappreciated by the men of the families, inasmuch as she found one husband cooking the noon-day meal, another doing the family ironing, and a third washing a Kelly pad and cleaning up an obstetric bag that had been used the night before.

As to length of time in practice, it was claimed that one, a Bohemian, had been in Detroit thirty-five years, and in that time had attended 11,000 cases. She was confidently asserted to be known all

over the city and to be better than any doctor.

A few observations made in the course of these calls may be interesting as showing the need of a thorough investigation of their practice.

1. All were foreigners, Bohemians, Poles, Germans, and Russians; some were unable even to speak English. In general, their appearance was that of the class of women they serve; many were themselves housewives.

2. The homes of three were neat and clean, of thirteen rather dirty, and of four, filthy, with unswept floors, dirty unmade beds and bedding, piles of soiled clothes in corners, food remains on furniture and window sills.

3. Four claimed to turn abnormal cases over to the physicians; three to use instruments and to care for all kinds of complications.

4. Not all were asked regarding abortions, but three stated that while they didn't do it themselves—oh, no, it was dangerous,—they sent their patients to physicians who could do it with perfect safety. One said she did it during the first month, but not later.

5. One had an office in her home, a small room containing a couch, a stand on which there was a wash basin, bottle of antiseptic tablets, and a large glass doored cupboard, the shelves of which held instruments, jars of iodoform gauze, and many labeled bottles, among them extract of Golden Seal and fluid extract of Ergot. Possibly this particular midwife bought pound bottles of Golden Seal for her own use, and had the gauze, etc., for display, but they seemed to indicate other things. The three or four advertising in the Detroit papers turned in comparatively few certificates.

The law of this State does not recognize a midwife other than a legally qualified physician and surgeon, and these

women are not licensed, registered or examined, but may enter a rather lucrative profession with no capital, experience or character, entirely at will.*

In New York, our most foreign city, the recent investigation by the Assistant Secretary of the Public Health Defense Bureau, an abstract of which report to the Academy of Medicine, many of you doubtless read in the *Journal of the American Medical Association*, showed that forty-two per cent of the birth certificates returned were signed by midwives, who were proved to be so ignorant, immoral and incompetent that, on the basis of this investigation, a bill was immediately drawn up and introduced into the legislature to regulate the practice.

Of our neighboring States, Ohio, Indiana and Illinois provide by law for the examining and licensing of midwives; and Wisconsin now has such a bill before the legislature. Massachusetts expressly forbids the practice of midwifery by any other than a legally qualified physician and surgeon, and has recently successfully prosecuted an Italian midwife, her conviction being affirmed by the Supreme Court of the State. The balance of opinion in those States that have taken up the matter seems to be in favor of licensing and regulation. Fourteen other States recognize them by expressly exempting them from the provisions of the medical act.

It has not been my purpose to give anything like an exhaustive study of the situation; but to bring before you for discussion the question of what shall be done with and for this large class of obstetric patients.

1. Is it possible or even desirable to keep this practice entirely in the hands of the medical profession, to the exclusion of midwives, and can it be done

without its becoming an actual burden to the profession?

2. If midwives are to be allowed to practice obstetrics as they now do, should not a thorough investigation be made, with a view to regulating their practice; first, as to their qualifications, experience and character; second, as to whether they restrict their practice to normal cases, or, as has been found in other States, they use drugs, prescribe for diseases of women, use instruments, and care for abnormal cases; third, as to their asepsis and the occurrence of puerperal asepsis in their practice; fourth, as to the condition of their equipment and the occurrence of abortions and still births in their practice.

Since the conditions vary so widely in the State, the practice of midwives being negligible in some sections, and amounting to one-fourth (and in some instances more) of all the obstetric practice in others, it would seem that legislation similar to the subjoined act, now pending in the New York legislature for the regulation of the practice of midwifery in New York city, and empowering either the state or the local Boards of Health to adopt such rules, regulations and ordinances as might be necessary to properly regulate it in different localities, would be advisable.

Copy of Bill.

STATE OF NEW YORK.

2d Rdg. 532.

No. 1514.

Rec. 249.

In Senate, April 30, 1907.

Assembly bill No. 1322, introduced by Mr. Gluck—read twice and referred to the Committee on Affairs of Cities—reported favorably from said committee and by unanimous consent ordered to a third reading, recommitted, retaining its place in the order of third reading—amended and ordered reprinted as amended, and when printed to be recommitted to said committee.

AN ACT—Regulating and Restraining the Practice of Midwifery in the City of New York.

*Since the completion of this paper the writer has been informed that there has been in Detroit for many years a city committee for examining midwives, but that none has been examined in recent years.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. The department of health of the city of New York is hereby vested with power and authority to adopt rules and regulations and adopt ordinances governing the practice of midwifery in the city of New York, including rules and regulations and ordinances for the admission to said practice, the exclusion from said practice, and the regulation and inspection of midwives and the practice of midwifery generally, in the city of New York.

Sec. 2. As used in this act the practice of midwifery means the offering or undertaking by any person to assist for a compensation of any kind a woman in normal child-birth, but it does

not include at any child-birth the use of any instrument, nor the assisting of child-birth by any artificial, forcible or mechanical means, nor the performance of any version, nor the removal of adherent placenta, nor the administering, prescribing or employing in child-birth of any drug other than a disinfectant. This act shall not be construed as applying to any practitioner of medicine duly authorized to practice medicine and registered according to law, nor shall it authorize any midwife to practice medicine.

Sec. 3. Any person who shall practice midwifery in the city of New York in violation of any rules, regulations and ordinances promulgated by the department of health shall be guilty of a misdemeanor.

Sec. 4. This act shall take effect immediately.

WHAT THE PUBLIC SHOULD KNOW CONCERNING VENEREAL DISEASE.*

LOUIS J. HIRSCHMAN, M. D.,
Detroit.

When requested by the Secretary of the Kalamazoo Academy of Medicine to address this audience on some phase of the all-important question of Social Hygiene, I accepted the invitation with great satisfaction. I was indeed glad to learn that the medical profession and the laity of the City of Kalamazoo were joining hands to fight the greatest peril which overhangs our civilization of today.

In a number of our large cities similar meetings have been held and societies have been formed for the study of this subject, and to devise some ways and means to commence the battle. The New York organization, called "The Society of Sanitary and Moral Prophylaxis," was organized two years ago with

over a thousand members, of both sexes, including physicians, clergymen, educators, business men; in fact, men and women from every walk of life. This organization has issued pamphlets for public instruction, carefully prepared by physicians most competent for the purpose. One of these pamphlets is entitled: "The Young Men's Problem"; another "For Teachers"; and the third, "The Relation of Social Diseases with Marriage, and Their Prophylaxis," and they are already accomplishing some good.

The second meeting held in this country was held in Detroit a year ago last December, and provoked considerable discussion from others outside of the medical profession, and started the ball rolling in Detroit.

It is peculiarly fitting that a subject

*Address delivered at a public meeting on Social Hygiene under the auspices of the Kalamazoo Academy of Medicine, at Kalamazoo, January 14, 1908.

such as this should first be introduced to an audience composed largely of those outside of the medical profession, by a member of that profession, who comes closest in contact with the awful consequences which result from ignorance, or viciousness, or both. Not a day goes by but the physician, no matter what special line of work he is following, sees one or more cases who consult him as the result, directly or indirectly, of infection from venereal disease. As I have stated before, it is the most serious problem that society has to deal with today, and the most menacing peril which confronts our civilization.

In order that you may have some faint conception of the widespread distribution and the nearness to home of this menace to our morals, our health and our very existence, a few figures might be of some interest at this juncture. I might say, before proceeding further, that one of the greatest obstacles heretofore to a thorough mutual understanding of this important subject, as well as many others, between the physician and the layman, and among the laity themselves, has been a lack of complete frankness, and the existence of prudery, or so-called "modesty," in dealing with it. In this address I will speak quite plainly and endeavor to make the few points that I wish to bring before you sufficiently lucid that I hope, when I have finished, that the question of venereal disease, its existence, its dangers, its consequences and its prevention may be considerably clearer to many of you than it has ever been before.

Ignorance of what venereal disease really is has been the greatest stumbling block in its prevention heretofore. "The essential factor for protection from disease is knowledge, and we must be aware of a danger in order to know how to avoid it. Houses in which contagious diseases exist are usually placarded, so that the public may know of their pres-

ence. Venereal disease, the most widespread, the most contagious of all, should be the most easily avoided, because, as a rule, the individual voluntarily exposes himself to infection. It would seem that in order to escape infection it would only be necessary that he should know of the real danger to him; but he does not receive this knowledge, or when he does receive it, it is usually too late."

"There has been considerable agitation in the last few years regarding the dangers of tuberculosis, 'The Great White Plague,' and societies for the study of tuberculosis have been formed and are being formed all over this great land. Yet venereal disease, whose dire influence upon mankind is far greater than that of tuberculosis, is met by a conspiracy of silence. Society aims to conceal the very existence of these dangers. This, in part, is due to the fact that these are looked upon as shameful and disgraceful diseases, and the sufferer justly punished for his sin; but this view of the matter entirely overlooks the most important and most deplorable fact that to the greatest extent it is the *innocent* who suffer."

I will not burden you with many statistics. The few figures that I will quote are conservative if anything, as in diseases of this kind it is absolutely impossible to get a correct census, but from the available sources they are bad enough; the actual figures would be far worse if they could be known.

The two principal venereal diseases are gonorrhea and syphilis. Gonorrhea—vulgarly called "Clap" or a "dose"—is of course the most prevalent, and is usually, unfortunately, considered by the victim as "of no more consequence than a simple cold." Syphilis is known vulgarly as "Pox" or "Chancres." It is stated, on good authority, that 80 per cent of our adult males suffer, at some time or other, from gonorrhea, and that 10 per cent of our adult population, male and female,

suffer from syphilis. It has been estimated by the committee of fifteen of New York that in that city alone there are 200,000 cases of venereal disease annually. Stop and think what the above statement means. Eight out of every ten young men of your acquaintance are morally unclean and physically diseased; one out of every ten of your friends is tainted with that most dread of all scourges, syphilis.

From these figures you will see that venereal disease, far from being a disease solely of the lower classes, of the ignorant and vicious, is found in all classes and in all grades of society.

Ninety-five per cent of all operations upon women for suppurative conditions in the abdominal cavity are the direct result of gonorrheal infection, innocent in most cases on the part of the victim, contracted from a husband who very often considered himself cured for years. Fifty per cent of all abdominal operations on women are the direct result of venereal infection, and 80 per cent of all deaths from pelvic diseases in women are directly due to gonorrheal origin.

The following story from real life can be duplicated many times over by any physician.

"Miss Rose —— was a little over twenty-two. She was a bright, cheerful, happy girl, and this was her happiest day. Not only because on that day she was graduated from Barnard College with high honors, but Edward—dear Ed., whom she loved and looked up to for so many years, had proposed last night, and the passion, romance and aroma of that proposal still lingered with her. And how the plans and hopes and dreams kept chasing each other in her active fertile brain. She had decided where they would live, where they would spend their summer, how she would bring up her children, etc., etc. And Ed was a husband to be proud of. Though but twenty-eight years old, he had already achieved eminence in the legal profession, and his practice was more than he could attend to. And he was one of those rare specimens, a truly honest lawyer. Not honest in the legal sense, but hon-

est in the true human sense. And kind-hearted, a gentleman in the noblest sense of the word and an all-round athlete. A man to protect a woman from every possible care and to make her happy as long as she lived. So thought Rose, and she was right.

"They were married in October. They expected to stay away three months on their honeymoon, but they returned after about three weeks. Rose was not feeling well, and traveling and staying in hotels didn't agree with her. She looked rather tired and fagged out, but that was natural. It was not natural, however, that after a week's rest she did not show any improvement. On the contrary, she began to look somewhat haggard. She had a little irritation in the genito-urinary tract, increased frequency of urination, etc., but as this is not unusual in newly married women, it was not considered of sufficient importance to consult a physician. Things continued this way, getting a little better and a little worse, until the beginning of January. On the fifth of January she was taken violently and dangerously ill. Severe abdominal pain, very rapid but hard pulse, and threatening collapse. The physician who was called in diagnosed the case as ruptured tubal (extra-uterine) pregnancy. A consulting surgeon was called in, and it was decided that in order to save the patient's life an immediate operation was necessary. And, though it was midnight, the patient was quickly removed to the hospital and operated upon. No signs of extrauterine pregnancy were discovered, but about three and one-half pints of a blood stained and somewhat purulent serum were removed. An examination of this serum demonstrated the presence of millions of gonococci (the germs of gonorrhœa). We had to deal here with a case of fulminant gonococcal salpingitis. Both tubes were thickened and inflamed and they were removed. And so was the now useless womb. The operation was a "success," i. e., the patient recovered.

"A confidential talk was had with Mr. Edward. He searched his memory for a while—yes, some two years ago he had a very mild attack of—he did not know whether it was gonorrhea or something due to a "strain." It was very mild, it didn't bother him much, he went to his physician who gave him an injection, and he was all right in three or four weeks. He never attached much importance to that attack, and it had escaped his memory entirely. An examination of his urine, however, demonstrated the presence of shreds,

and while no gonococci could be found in the urine, they were demonstrated in the expressed secretion from the prostate and seminal vesicles. The despair of Mr. Edward at learning that he was the unwitting cause of the tragedy can better be imagined than described.

"Rose recovered, but you would hardly know her if you saw her. She aged ten years in ten weeks. She is making no plans, she has no hopes, she is dreaming no dreams—not for the present at any rate. Never again will she be the happy Rose that she was before she became Mrs. Edward. Never will her home be gladdened by the noise, romp and laughter of little children.

"Who is to blame? Nobody. Rose certainly is not, nor is Ed, for he certainly would have had his right hand cut off—and his left one too—rather than cause the woman whom he loved above all else in the world any pain or suffering. But he "didn't know," and we cannot be blamed for things that we do not know, and that we never were told that we ought to know. Should we blame those who insist that all knowledge of sexual matters be kept away from the people? Perhaps, but even they are more to be pitied than blamed. For they are generally sincere in their beliefs and we cannot blame them for their ignorance.

"No, nobody is to blame, but it is the duty of those who see the light to spread the knowledge of sexual matters and of the dangers of venereal disease before the people, so that tragedies like those that have struck down our friends Rose and Edward may become rare or impossible in the future.

"It should be an absolute law that every man who indulged in promiscuous intercourse, no matter how rarely, should have his urine and his prostatic secretion examined before marrying. This, even if to his knowledge he never had gonorrhea. For there are gonorrheas without any subjective symptoms, gonorrheas in which the gonococci remain dormant, only to awaken into virulent activity at the first opportunity. And newly married life is such an opportunity!"

Fournier, of Paris, France, the greatest living authority on syphilis, states that of all the women who come to him suffering from syphilis, 20 per cent are married women, and they have been infected by their husbands. "Out of 312 cases of syphilis in married women, in 218, or

about 70 per cent, it arose from syphilis contracted by the husband before marriage; and in 94, or about 30 per cent, it arose from syphilis contracted by the husband subsequent to marriage. Professor Fournier finds that in 154 cases where the wife was contaminated by syphilis acquired by the husband prior to marriage, the manifestations of the disease appeared in no less than 117 of wives thus contaminated during the first six months after marriage, while in only 13 did they appear in the second six months, and in 9 in the course of the second year. Equally significant is it that in three cases the first symptoms manifested themselves as late as the sixth year of marriage, in two in the seventh, and in two others as late as the eighth and ninth years respectively. Some cases of early contamination after marriage were due to a syphilis in a state of incubation in the husband, acquired as the result of a traditional and dangerous ceremony where a sensual orgie is participated in as a preliminary to the lawful indulgence of matrimony. A still greater number of early cases were due to husbands marrying with syphilis in the full tide of secondary manifestations." It is estimated that 60 per cent of the unwillingly sterile and fruitless marriages are directly due to gonorrhea; 98 per cent of all children who become blind in infancy are the innocent victims of gonorrheal infection from one of their parents, transmitted during their journey from the mother's womb to the outer world, and from 20 to 80 per cent of the inmates of asylums for the blind (depending on the country from which the statistics were gathered) have also been robbed of their sight by gonorrheal infection. Seventy-five per cent of all cases of so-called inflammatory rheumatism, which often results in permanent deformity such as a stiff elbow, stiff knee, stiff wrist, are really not rheumatism at all, but arthritis, or inflammation of the joint

caused by gonorrhea. More than one-half of the men beyond middle age suffering from that "hell on earth," enlargement of the prostate gland, are the victims of the after effects of supposedly cured gonorrhea. All of the victims of stricture, and many of those of tuberculosis of the genito-urinary tract, can trace the beginning of their affliction to what was supposed to be a "simple, light attack of gonorrhea." A great many men who have secured divorces on account of the sterility of their wives are themselves the guilty culprits, their procreative power having been destroyed by previous attacks of gonorrhea and its complications. A prominent specialist states that there are more cases of gonorrhea among virtuous wives than in all the prostitutes in this country.

Almost without exception, every case of apoplexy occurring in a person below 45 years of age is of syphilitic origin. Ninety per cent of all cases of locomotor ataxia are due to syphilis, and 4 per cent of all syphilitics are afflicted with locomotor ataxia. This was strongly proven by Dr. Minor, of Moscow, who found that his patients of the Hebrew race were strikingly free from syphilis and also from locomotor ataxia.

Our insane asylums are filled with various types of insanity due to syphilis. Paretic dementia, or what is commonly called paresis, is almost always caused by syphilis.

Several years ago a minstrel troupe was being shown through the Eastern Michigan Insane Asylum at Pontiac. As they strolled through the different wards in company with the medical staff, one of the members of the troupe, entering the department—one of the largest in the asylum—devoted to those suffering from paretic dementia, casually asked the doctor with whom he was walking,—

"Doctor, what is the most common cause of this horrible form of insanity?"

The doctor replied: "Syphilis," where-

upon his interrogator dropped to the floor in a dead faint. Thus was the lesson brought right home to another victim of the dread disease.

Forty per cent of all abortions, not produced criminally, in this country, are the result of syphilis. Children born of syphilitic parents either die young or become physical and mental degenerates, innocent victims of their fathers' crime.

In the United States Army and Navy, in the last year, 28 per cent of non-effectives and 18 per cent of discharges were directly due to venereal diseases.

Sixty per cent of all abdominal operations done upon young women, within the first year or so after their marriage, are directly due to infection from the husband who may have conscientiously believed himself to be cured from a gonorrhea which was acquired perhaps years before,—as has been well illustrated in the story of Rose and Edward. Many women who do not die from abdominal operations done for suppurative conditions due to venereal disease, are consigned to a living death, a life of chronic and permanent invalidism, due to infection from gonorrhea.

I might go on in this strain for some time, but I believe that you have been put in possession of a few facts which will bring out perhaps in a more emphatic manner how prevalent venereal disease is today, and how awfully its consequences are visited on the innocent as well as the guilty. No eloquence which one might bring to bear upon the subject would have such force as these figures, which are founded on absolute facts. Of course, a small proportion of the victims of venereal disease acquire it in an innocent and extra-genital manner; that is, one may acquire either disease from infection from unclean towels. Syphilis has been acquired in the barber shop, from the public drinking cup, the common communion cup, from kissing one who is afflicted with the disease,

from occupying the same bed, and many other ways in which one may come in contact with the fresh infective material itself.

Less than 100 years ago small-pox was prevalent all over the world; today it is almost extinct. Twenty-five years ago diphtheria claimed over 60 per cent of its victims, it was epidemic everywhere; today diphtheria is securely shackled by increased knowledge of the disease and its prevention, as well as the curative value of antitoxin, and less than 3 per cent of its victims are carried away. Within the next quarter century tuberculosis, "The Great White Plague," will be under just as secure control as diphtheria. The medical profession, assisted by an intelligent and willing laity, is slowly but surely stamping out one after another of the infectious diseases.

What of venereal disease, which is a disease not only of the body but of the morals as well? We believe that the world is getting better in a great many ways. Honesty crops out more frequently in business and in professional life; people are becoming educated earlier and in greater numbers. May we not hope that, with education started at once, and kept up in a proper manner, in the next half century perhaps venereal disease will be under control? It seems like a hopeless task, but other tasks which have seemed just as hopeless have been accomplished by making a beginning.

The beginning must be made, now, by you and by me, by the laity and the medical profession. The Church, the University, the Home, the Press, the Public—all must join together with the one great common end in view, to save our civilization and society from being dashed to pieces on the rocks of physical and moral disintegration!

How are we going about it? In the first place, we must strike at the root, and do it early, and our one great powerful weapon is not physical, is not theo-

logical, but educational. We must start with the child as well as with the parent. We must first take our own profession, the medical profession, rouse them up to the fact that just the same as they are laboring to prevent diseases along other channels, through the propagation of sanitary ways of living and the teaching of hygiene and the prevention of disease in general, they must educate the parents and the teachers, and the parents and the teachers must educate the children.

One hears parents objecting to instructing their children in matters pertaining to the mystery of life, to sex relations and the propagation of mankind; and yet, while these very parents are hesitating, the children are receiving their instruction in a most vicious manner from their companions of the gutter and the school-yard.

Where did you, gentlemen, get your first instruction, your first knowledge of sexual matters? Did you get it at home? Did you get it at school? Did you get it at church? No. I will venture to say that every man in my hearing got it just where many of us got it—in the school-yard, or on the street, in the worst possible manner.

Dr. Albert E. Sterne, of Indianapolis, in an article along these lines, says:

"Several habitual indulgences usually go hand in hand with those of the sexual sphere, and they are likely to begin rather early in life, at a time when the mind of the boy, and to a lesser degree of the girl, is peculiarly receptive to impressions of all kinds. Not uncommonly these indulgences date from the school-room days—not as a matter of curriculum, but of companionship. Only too frequently lads in the early adolescent period, even in the early teens, are guilty of conversations replete with unpublishable anecdotes, which are apt first to have been heard from older boys or men—more's the pity. In the developmental years, it is easy to inflame the fancy of almost any boy. From mere lascivious pictures, fostered by salacious tales, it is but a step to the awakening sexual instinct, in most boys easily and early aroused, especially associ-

ated with long hours of sitting in the school-room which in itself is likely to provoke a certain degree of passive congestion of the genital organs. In nearly every school there is at least one vicious boy who is apt to be peculiarly fascinating to his fellows, who readily acquires a following among lads of as weak or weaker mental mold than himself. He gives the impression and the others quickly acquire it—that to be a “man” is to assume not the noble, but the ignoble elements of manhood. His preaching is pernicious and, appealing to the sensual, likely to find ready acceptance among boys—even among those who have refined home surroundings. It becomes the “thing” to smoke cigarettes; to talk lustful subjects; to read smutty tales; to indulge in more or less onanism—not by any means always secret—and finally to seek actual sexual intercourse, first among comparatively decent girls, soon in company of other boys among women of older years, whose experience in such matters completes the primary cycle of salacity.”

We are not confronting a theoretical danger to our young and to ourselves; we are confronting absolute facts, and it will do no good to bury our heads in the sand, like the ostrich, and say they do not exist, or it is not as bad as it is supposed to be, but we must face them squarely, bravely and consistently. Parents must be taught to teach their children at an early enough age so as to anticipate the school-yard teaching; if they do not feel equal to the task—and they should make themselves equal to it, for they are the proper ones to impart this information—the family physician should be called in. The child should be told, in a quiet, dignified way, about life in the vegetable kingdom, and then in the animal kingdom; they should be told about their physiology, including the physiology of the sexual organs, and the way in which children are borne into the world. They should be told what a beautiful thing the creation of the human being is, and how it is a sacred duty of parents to bring forth children into the world; they should be told of the dangers of the loss of the ability to bring forth

children through venereal disease, and how willful abuse of the functions of the genital tract should be guarded against. They should be told of the dangers which befall young boys and young girls from evil associations, and that the result of such associations may be the loss of the power of becoming parents when they grow up.

I believe that it can be put in such a manner that it will be a lesson which will stick just as much as a great many others which are taught at the same tender age. What young boy or young girl of nine or ten would think of walking out on the street naked? He is taught, and it becomes a part of himself, that one's person must not be exposed at any time, and it becomes natural for a child, instinctively, to keep his person covered. This could be carried further, and the writer believes that children, if instructed in the proper manner at home, will instinctively repel all suggestions made by other less fortunate children of a vicious nature.

One of the best articles along this line that has come to the writer's notice was a talk on Sex Relations by Rev. N. E. Boyd, of Boston, which was given under the auspices of the Moral Education Society, and the Ladies' Physiological Institute. I will quote somewhat from this talk, insofar as it pertains to the way to impart knowledge to children on the mystery of life. He says:

“Children begin early to put questions about the origin of human life, and they are then entitled to straightforward, satisfying answers. It is right and proper for them to ask; it is also right and proper for their elders to tell—tell truly, simply, clearly, with tender seriousness and reverence, too.

“Dodging the child's question, or answering it evasively, at best fails to satisfy its curiosity, leaving the ground unoccupied, for the future reception of bad or good seed, as the case may be—with the chances in favor of its being bad. Thus you leave ‘the unsullied chambers of its brain,’ which should be filled with angelic tenantry at

the first opening, to be possessed of any devils that may happen along. But generally the matter is so bungled as to inflame the curiosity, which was natural and wholesome, until it becomes morbid and guilty, and courts the demoniac influences which wise teaching might have neutralized and replied. When your distrustful reserve has forbidden the little ones to give you their confidence in "delicate" matters—the very ones regarding which you should make a special point of winning and keeping it—they are not only left exposed, unarmed, to temptation and corruption, but precluded from seeking your guidance when they are in doubt, or help and comfort if they get in trouble; they are prepared, I may almost say driven, to fall a prey to those vile quacks whose advertisements deface the columns of low papers, further mislead the erring, impose upon the ignorant, and even poison the innocent and unwary.

"Enough of how not to do it. Now for the right way.

"TELL KINDLY, FRANKLY, REVERENTLY.

"Suppose an infant brother or sister appears in the house. The elder child (perhaps only two or three years older), interested and delighted, wants to know, 'Where did you get baby? Where did she come from?' Then is the providential moment to tell the guileless, candid little seeker, 'Dear, she grew inside of mother; she had been growing there this long time—almost a year.'

"If the next inquiry should be, 'How did she grow?' You might answer, 'Oh, as an apple grows upon the tree. You remember how I showed you a little bit of a knob on the branch of our apple tree after the blossoms fell off last spring, and how it grew bigger and bigger, and kept sucking sap from the old tree, till it got as big as your fist, as big as my fist, and by and by it got so large and ripe it could not hang on any longer, and then off it dropped! Well, that was somehow the way with baby sister; only instead of hanging on a limb, she grew in a little pouch in dear mother's body, and when she got large and ripe enough she was born.'

"Should our young inquirer still ask, 'But how was she born?' he might be told (still and always with simplicity and reverence on the teacher's part), that 'mother's body came open and baby was pushed out.'

"All this—and more, if need be—kindly, purely, seriously. There is nothing in such inquiries and answers that need raise a laugh or blush.

"Yet, to guard against giving what is holy to dogs, nay, more, against offending those who are as yet weak and unable to hear, it would be well, while inviting free inquiry and thorough confidence from our children and pupils, to caution them somewhat as follows: 'You can always ask me about these things; I will be glad to have you, and will tell you the best I know. But do not speak to anyone else about them, wait till we are alone together. And if you hear anything said about babies growing and being born, that you haven't heard before, always come to me about it, and find out if it is true.'

"I would not try to tell more than is asked for; but would simply appease curiosity for the time being with truthful and enlightening answers, leaving the child encouraged to inquire further when new questions arise in his mind. I would not hesitate, however, to exhibit and explain anatomical plates and manikins, if they were within reach; I would slake the thirst for knowledge with the physiological facts; particularly as playmates and bed-fellows often discover the most obvious differences of sex, and presently ask why little girls are made different from little boys.

"Such interrogatories bespeak the most candid innocence. Then do you—with a silent thanksgiving that the young mind is thus pure, plant in that virgin soil the good seed of chastity and righteousness. This is the golden moment for teaching the true office of the sexual organs, namely, that they are for making human beings; that they are very precious and sacred; that it is not right to try to use them until they are fully grown and fit for their important work; and that even then people must do so only when he and she love each other so dearly that they wish to make a home together, and are all ready to take care of baby when it comes.

"One morning a young mother, leading her seven-year-old twins by the hand, entered the lecture room of Dr. S——, in Paris, just as he had dismissed his class, and politely asked that herself and children might be shown the large anatomical plates of the human body. As one after another was exhibited and explained, the plate showing the womb in the seventh month of pregnancy with twins came in order; and as the doctor was hastily withdrawing this without comment, the mother said: 'Please do not lay *that* aside; it is the one of all others I am most anxious that my children should see. Be so kind as to explain it fully to them.' And placing her little sons directly in front of it, she said, 'You know,

my darlings, I have told you that some day I would show you a picture of the little room in my body where you lived and slept so long a time before papa or I saw you. We can't help loving one another as we do, when you see how close to mother's heart you both lay for nine happy months. By that time you had grown too large to be comfortable in that warm little room, and then it opened for you to pass out into my arms. Dear little sister lived there, and came to us in the same way; and all little babes have such homes in their mothers' bodies until they are old enough to leave it.' Dr. S—— was moved to tears, and said to her: 'Madam, you have given me, as well as your children, the best explanation of that plate that was ever made. I cannot add a word.' And as she left the room, "Ah," said he, "I need have no doubt as to the kind of men those sons will make, with such a mother and her pure instruction."

"The knowledge that one mother had so thoroughly understood and performed her duty to innocent childhood stimulated me," said Dr. Boyd, "to tell my sons, at an early age, the simple truth in a similar manner. And now, in their early manhood, the uprightness of their character and the purity of their lives, their daily devotion to mother and all womankind, is a glowing testimonial in favor of intelligent truth against falsehood and deception.

"Let us give the young people, from the very outset, definite as well as ennobling views of sexual facts and duties. The subject is sure to be thrust upon their attention sooner or later, to be canvassed either openly or clandestinely, with the upward or with the downward look. Then, let their first impressions (which are proverbially the abiding ones) come fresh and sweet from the wise and good, not foul and poisonous, from some ignorant and corrupted source. Do not let the enemy get in his tares before your wheat. And never tell of wickedness at all unless or until you have to; but let the good impressions come as early and get as firmly fixed as may be. Remember that the seed time is made known by the first questioning; and the sooner ideas of continence and chastity are implanted, the more likely are they to become rooted, abiding principles. And again I say: Do not let the enemy get in his tares before your wheat.

"Were our young folks treated in the manner sketched above, would they not be prepared to meet the tests of later life understandingly, re-

ligiously, triumphantly? When, at the age of puberty, desire awoke, would it not be better interpreted and controlled? Would not the youth view the portion of his nature now unfolding as a function to be trained and disciplined and hallowed? Would not the maiden reverence her maternal power? Would not each be wiser for both, 'forbearing one another in love'—saving each other from all the unwholesome excitements and risks to which fond ignorance too often exposes lovers?

"By and by, it may not be for ages, but by and by humanity shall learn the lesson that we abstain from all impurity; that we know, every one of us, how to keep our body in sanctity and honor, not in passionate desire."

I do not believe in school-room education on subjects of this nature, because where one addresses large numbers he is apt to lose the personal interest of each member of the class, and very often more harm than good is done. Nothing can take the place of individual instruction from parent to child. Where education is undertaken in the school, two or three young boys or young girls, of somewhat similar disposition, should be taken together, and a heart to heart talk given from teacher to pupil. They should be allowed to ask questions and these questions should be conscientiously and faithfully answered. The child will then see, and believe and know that he is being told the truth, and any suggestions coming from evil-minded companions will not carry much weight. As children grow older they should be taught, by physicians of their own sex preferably, more about the physiology of their organs, including the sexual organs. Young boys should be taught that, as puberty comes on, their powers of reproduction become established; they should be told then, and it should be emphasized, the danger of the loss of such power through the contraction of venereal disease. Young boys and young men should be taught that absolute sexual continence is perfectly compatible with perfect health, the teach-

ings of their companions and associates to the contrary notwithstanding. They should know that "seminal emissions," so-called "night loss" or "wet dreams," are simply natural physiological discharges, and are as natural to the healthy man as menstruation is to the woman.

The advertising matter of the quack and the charlatan is filled with dire warnings against the dangers of these "losses," and the young man's mind is early poisoned by such literature, and great harm has been done.

A writer in the New York State Journal of Medicine was asked how a man who had the sexual instinct highly developed and had sexual desires could keep from remaining continent and be healthy. I will quote from his reply as follows:

"The best interests of the individual, of the home, and of society, demand that man shall cohabit with none but his wife; in other words, if a woman is not his wife he shall not cohabit with her. This is a simple rule; it will stand the test of analysis; it is easy to remember; and should be taught along with the reasons for it to every boy and girl who reaches puberty.

"Every infringement of this rule makes for ill. The penalties and dangers in its violation I should enumerate as follows. They are: The moral and social degradation of a woman who otherwise would live rightly; the danger of causing disease in such a woman; the encouragement by example of a practice which stands pre-eminent as the great cause of social unhappiness; the subtraction of just so much joy and devotion from the woman who should or will stand in the proper relation of wife; the possibility of the propagation of illegitimate children; the strong probability of contracting venereal disease; the danger of transmitting physical or moral blight to one's offspring; the development of vicious habits; the cultivation of immoral society; the wasting of time and energy in unprofitable company; the social harm to one's self and family; the mental and moral harm which springs from acting in secretiveness and shame; the contracting of the concomitant vices which go hand in hand with venery for venery's sake; and the post-

ponement of the organization, or the weakening of the strength of that most potent factor in the solidarity of society—the home. These are strong reasons against extramarital sexual intercourse; and each is susceptible of most serious consideration. Moreover, to these should be added the fact that sexual intercourse is absolutely not necessary at all for one's health: the suggestion that it is necessary is only repeated and passed along by the offenders, who desire an excuse for their own weaknesses.

"Concerning the specific case in question—the man who practices what he knows is wrong and harmful—there is just one thing for him to do, and that is to stop. If he desires to correct his habits, but does not, and is much in a state of sexual excitement, then I should say that one or more of three things is the trouble: He is either suffering from idleness, the prime promoter of vice; his education and knowledge of the simple things are defective; or he has a mental defect which should receive consideration from the neurologists.

"A man who has a serious hold on the essentials of life, and who is busy with useful work, as every man should be, whose mind is occupied with thoughts of wholesome interests, or whose time is consumed by his vocation, does not suffer the sexual dangers inherent in idleness.

"Every man should have a knowledge of the anatomy and physiology of the sexual organs, and he should be familiar with the meaning and dangers of venereal disease, and also with the objections to extra-marital venery which I have already enumerated. If he is not, his education in the simple essentials is defective. The prudishness which deprives young men of this knowledge is decidedly immoral in its results. The Japanese, among whom men and women innocently bathe in the same pool, are free from prudishness and from the vulgar sense of suggestiveness at the sight of feminine curves, which characterizes the ogling occidentals. For the same reason a boy brought up among sisters has less of this pernicious prudishness which covets the sight of hidden charms. Carlyle has said that the beginning of wisdom is to look on clothes till they become transparent. The man to whose eye they cover a great and elusive mystery is not an educated man.

"I know an unmarried man who has said to himself, 'I shall marry some day; somewhere in the world a woman is keeping her chastity inviolate for me; and I shall do the same for her.'

With this philosophy he dismisses the subject from his mind; the matter is disposed of; he does not bother his head with sexual debates; the question is settled; it can not come up for reconsideration; and he gives himself and his energies entirely to other matters. It is a splendid thing for a man to pronounce a final settlement upon an important question which otherwise might constantly recur and harass his mind. The man with a determined principle has clear sailing. A course of conduct then becomes easy. It is the unfortunate weakling who has not decided his questions, and the man who does not want to decide them, who keep themselves in hot water."

Young girls should be taught of the menstrual function before their menstrual life starts. They should be taught the beauties and duties of motherhood, and they should be told of the dangers which lie in their paths and which they must avoid if they wish to retain that power of some day becoming a wife and mother.

Regarding the education of young men and young women, we have a difficult problem to face. As they grow up in young manhood and young womanhood, their passions are appealed to in a great many ways; the stage, the press and literature of today all teem with powerful vicious, salacious and alluring suggestions. The young man is too often lured into houses of prostitution by his more worldlywise companions, and before he realizes it, his passions get the better of him and he becomes another victim of venereal disease. His education comes too late!

About a year ago I wrote an article along this line, which was published in the Harper Hospital Bulletin, of Detroit, a publication which circulates only among physicians. In some manner, a copy fell into the hands of a young man in Saginaw, who wrote me the following letter, which is self-explanatory:

"Saginaw, Mich., May 20th, 1907.

Dear Doctor:—

I happened across a Harper Hospital Bulletin

today and read your paper that was read before the Wednesday Night Club at Detroit, March 18th. It was a Godsend to me, and gave me the information that I have been looking and praying for, for several months. If I only had this lesson given to me before, God only knows how thankful I would have been.

I am a young man, 24 years old, and have been working for the ——— Co. eight years. Was born and raised in Saginaw and never had to consult a doctor in my life till last October.

It was one night during this month that I met two boys that I had gone to school with years before, and to talk over old times we selected a buffet and had a few drinks, after which it didn't take much persuasion and I accompanied them to a house of prostitution. It was the first time for me to be led to such a place; I had the looking after of a family, of a mother and three sisters, and a brother, all younger than myself, and seldom spent any money for pleasure.

Two weeks passed and I had to consult a physician, and he told me I had gonorrhea. It nearly broke my heart, for I thought I would be unable to work, which meant so much to me.

I was told not to be alarmed, that I could come out all right. In about a month I broke out with a rash and swollen glands, sore throat and my hair commenced falling out; I was again told not to be alarmed, but that I would be all right in the course of a couple of months; but I didn't seem to improve, getting worse all the time. I changed doctors and was told that I had syphilis in the second stage. I have been doctoring ever since, but don't seem to show much, if any, improvement.

Please be kind enough to tell me whether or not I can be cured, and what course to pursue, as I am in constant misery, and hardly able to sleep from worry it is causing me, fearful of the results it is sure to bring if not properly treated.

What advice can you give to a young man in this condition?

Thanking you most sincerely for this information and advice, and assuring you of my willingness to be governed accordingly, and do all in my power to return the favor should future opportunity present itself. I beg to remain,

Most gratefully,

.....

Here is another wail of anguish from one whose education has, alas! come too late!

A great many young men, who have been taught the dangers of venereal disease, often become the victims of disease in this way: They are told by their companions that every young man, in order to be manly, must have sexual intercourse; that nocturnal emissions, or the so-called "wet dreams" are stigmata of weakness and unmanliness, but they have not been taught the dangers of venereal disease from promiscuous sexual intercourse. They accompany their more worldly companions to the house of prostitution, and are informed that the inmates are examined by physicians and receive certificates stating that they are free from venereal disease, and that as an additional safeguard they may use various antiseptic injections after the seance and thus absolutely prevent venereal disease and at the same time receive all the enjoyment which they are assured by their companions accompany the escapade.

These periodic examinations (?) of professional prostitutes are worse than useless. In the City of Detroit, for instance, the Board of Health formerly had a rule, now abolished, requiring the examination of every prostitute at least once in two weeks, by a competent physician. It has been admitted that each prostitute receives at least four visitors a day, on the average, some as many as twenty-five or thirty in a single day. She gets her certificate on a certain day, showing she is free from communicable disease; ten minutes afterwards she receives a victim of venereal disease, and is infected. From that time on, until the next bi-weekly examination is made, she can infect at least three score, probably many more, victims, who are shown the certificate, believe they are safe, and rush blindly to destruction. Such a certificate is not worth the paper it is written upon ten minutes after the examination, and gives a false sense of security that otherwise might not obtain.

One could devote hours to the discussion of this subject of prostitution and how to limit it, but the scope of this address will not allow me to go into the subject at all.

One cause, the writer believes, for the increase in licentiousness, and consequent venereal disease, is the decreasing number of marriages in proportion to the population. In the struggle for existence, young women, as well as young men, are forced to seek employment at an early age—oftentimes at starvation wages. Friends and acquaintances of these young women—who have drifted astray—flaunt their silks and jewels in the eyes of their less favored companions, showing them what an easy life they lead, how easy money comes to them, how much finer clothes and jewels they can wear; and many a deluded young woman starts on the downward path for no other reason than the desire to wear as much finery as her gaudy, painted sister.

The extent to which public prostitution reaches, in some of the large cities, is astounding. In Detroit, for instance, a city of 400,000 people, there are to the knowledge of the police department, over 125 known houses of prostitution with over 500 registered inmates. There are known to be at least 500 more women who walk the streets and make their living by picking up victims and frequenting houses of assignation. Practically every one of these women has, at some time or other, had either gonorrhea or syphilis, or both. The number of clandestine professional prostitutes of course cannot be estimated, but by the known number it will be seen it allows one for every four hundred of population, or one to each 90 young men between the ages of 15 and 30, and, when one figures that a low average for each is four visitors daily, one can get an idea to what an extent this evil has grown and how large the opportunity for in-

fection is when we remember that over 80 per cent of all young men in cities particularly are exposed.

During the year 1898 I was on the staff of city physicians of the city of Detroit, and during the summer I was called to attend fourteen cases of attempted suicide among the demi-monde. On making inquiry in each case as to the reason for the act, it was usually that the victim was tired of the life she was leading and wished to put an end to the whole business. Upon further inquiry it was found that these women did not go into the life for the love of it, or purely for sexual gratification, but because they had, for the most part, been working at small wages as domestics, waitresses, sales girls, and other like occupations or had been betrayed by a lover, and left with a child to support, and found they could make more money, and more easily, with which to buy fine clothes and jewelry.

The question of starvation wages for female employes is one which the writer cannot touch upon, but is a very important factor in this question. How many women of the so-called better classes demand so much, making marriage so much more expensive, thereby preventing many an estimable young man from marrying early, as he should, have been the indirect result of his satisfying his passions in an illicit manner, contracting venereal disease, and thereby rendering himself unfit for marriage ever thereafter?

I do not wish to exceed the time limit which I have set for myself, and my only apology for the length of this address is my intense interest in the subject, but there is one important matter to which I wish to call your attention before I close, and that is, as a physician, the insistence on the part of parents upon an absolutely clean bill of health from the young man who wishes to marry their daughter. I have seen,

and every physician has seen, so many lamentable instances of the sacrifice of beautiful young lives on the altar of venereal disease that I wish to impress this one point before closing. No man, no matter how apparently perfect and upright, and estimable and moral he may seem, should be allowed to marry any young woman until his entire sexual apparatus has been examined by a competent medical man, repeatedly, and that examination must be thorough, must include a bacteriological examination, and the entire absence of the gonococcus or germ of gonorrhea, and the entire absence of the syphilitic taint absolutely demonstrated. This is a most vital point. It should mean more to the parent than the ability of the man to support the girl in the manner in which she has been accustomed, and should be insisted upon by every parent before giving his consent to the marriage of his daughter.

To show you how this matter will come home, let me relate a little occurrence of my own personal knowledge:

A professional friend of mine, who, by the way, made a specialty of the treatment of syphilis in particular, had an only daughter who was beautiful both in person and manner. Her mother died while the girl was still young, and she and her father lived together happily, very much wrapped up in each other's happiness. In due course of time a young man appeared upon the scene—a young man of excellent family, fine appearance, good education, able to support a wife, and of apparently perfect morals. He wooed the daughter, pressed his suit diligently, and finally won the consent of both parent and daughter to his marriage. The young couple were very much in love with one another, and the father was correspondingly happy in the happiness of his daughter. One summer the father, who had a summer home not far from the

city, invited the young man to spend Sunday with them. He arrived on Saturday evening, and the three spent a very pleasant evening together. The young man was shown to his room and the others retired to their respective chambers, when the doctor heard the sound of a falling body coming from the young man's room. He hastened thither and found him lying unconscious upon the floor. He loosened his clothing in order to give him more air, when he discovered a peculiar eruption on the young man's body. He applied restoratives and the young man recovered. The next day the doctor had a talk with this young man and questioned him regarding the eruption, and the young man absolutely denied the existence of any venereal disease. The father, however, made further investigations, and discovered that this apparently estimable young man who was about to marry his daughter was suffering from syphilis in

the secondary stage; and, by the merest chance, the young woman was saved from infection. Here was a father, himself an expert in the diagnosis and treatment of venereal disease, who knew the awful consequences of this disease, and who had repeatedly advised others along these lines, but he was so blinded by apparent excellence and with the young man's reputation and character, that he had almost made the sacrifice of his only daughter to this horrible disease.

Gentlemen, there is little more to add. Take what has been said here tonight to heart and remember that it is not idle talk, and that you are all confronted by this awful peril; that it means as much to your children and your children's children as to yourselves. Let me close with one plea: That you, who are fathers, educate your children, before it is too late, and those of you who are yet young men, beware of the peril before you.

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Remarks on Appendix Abscess.—Battle, The Practitioner, says that a waiting policy is not advisable for this condition, for a favorable termination can seldom be prognosticated with assurance. Many dangers may be avoided by the early evacuation of such an abscess, for (1) it may open into the bladder, large bowel, or rectum; (2) it may extend to the pelvis and left side of the abdomen, or into the hepatic region or even into the pleural cavity; (3) it may rupture into the peritoneal cavity; (4) it may cause general toxæmia; (5) it may be complicated by in-

testinal obstruction. Stress is laid upon the importance of rectal examination, especially in cases in which the symptoms are indefinite and the local signs few. It is thought that removal of the appendix is not indicated as a routine practice. The opening of the abscess is without danger if done by a competent person, but the search for the appendix in the wall of an abscess may cause serious trouble. The mortality of appendix abscess from all causes in a consecutive series is placed at 10 per cent., but if treated surgically, from the first it should be under 5 per cent.

A COMPLETE, PRACTICAL, AND BRIEF EXAMINATION OF THE ALIMENTARY TRACT*

W. H. ENDERS, M. D.,
Jackson.

Upon investigation, it is very noticeable how little is really being done in regard to accurate diagnosis in diseases of the alimentary tract in private general practice.

In order to arrive at a definite conclusion as to existing pathological or functional conditions, it is absolutely necessary to examine, along with the test meal, the feces and the urine. Much can be learned of the functioning power of the stomach and the intestines from certain tests of the urine to be hereinafter described.

The object of this paper is to give a detailed explanation of a practical examination that cannot fail to give results; and which does not require, after a little practice, more than fifteen minutes' time.

The Stomach Analysis.

The test meal consists of a single shredded wheat biscuit or a small piece of dry, stale bread and two teacupfuls of either hot or cold water. This is usually taken at 8:15 a. m. and the patient is instructed to come to the office at 9 a. m. and bring along a characteristic stool and two specimens of the urine, one passed one hour before breakfast and one passed an hour after the preceding evening meal. The stomach tube is introduced at 9:15 a. m. and a varying quantity of thin whitish liquid is recovered. This is examined macro-

scopically for mucus, bile, blood, also the odor and color are observed. A small drop is placed upon a slide and examined microscopically for food remains, yeasts and sarcinæ and the Oppler-Boas bacillus. Then a drop of Lugol's solution is run under the side of the cover glass to indicate the extent of starch digestion. The color being blue for starch and violet for erythrodextrin, lavender for achrodextrin, and so on down to straw color for glucose and dextrose. The test meal is then filtered and the filtrate is examined quantitatively for free HCl, combined HCl, total acidity, lactic acid, pepsin and rennin and the solubility of starches. For the quantitative examination the following reagents are required:

1. Decinormal sodium hydroxide solution.
2. A one-half percent alcoholic solution of dimethyl-amido-azo-benzol.
3. A one percent phenol-phthalein solution.
4. A one percent alizarin solution (aqueous).
5. A ferric chloride solution.
6. A two and one-half percent carbolic acid solution.
7. Lugol's solution.

No. 2 indicates free HCl. In its presence the filtrate assumes a deep carmine color. No. 3 indicates total acid. No. 4 combined HCl. No. 5 and 6 combined in proportion to ten cc. of the carbolic acid solution and the small drop of the ferric chloride solution, making an amethyst color, indicates lactic acid. No. 7 indicates the solubility of starch.

The decinormal sodium hydroxide solution is put into a graduated burette. This should be graduated to millimeters.

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Five cc. of the gastric filtrate is placed in a beaker and two or three drops of solution No. 2 is added. If free HCl be present, the fluid assumes a bright carmine color. If none is present, the filtrate is colorless. Now run in the solution of sodium hydroxide from the burette, first noting the height of solution, until the color of the filtrate begins to fade. Note the number of cc. used. This multiplied by twenty will give the number of cc. in the hundred, the normal being from twenty-eight to thirty-five cc. to the hundred for free HCl. Now take the same filtrate and add a drop or two of the phenol-phthalein solution and run in from the burette the sodium hydroxide solution until it assumes a pink color. Note the height of reagent in the burette. Subtract the initial reading from this and multiply by twenty and the result is the total acidity, normally from forty-five to sixty. For the combined HCl add two or three drops of the alizarin solution to five cc. of the filtrate. Titrate as before until a dark violet color is obtained. Observe the number of cc. of sodium hydroxide solution used; multiply by twenty and subtract the result from the total acidity and you have the loosely combined HCl.

For lactic acid take ten cc. of the carbolic acid solution, add one drop of ferric chloride solution and dilute until a deep amethyst color results. Add some of the filtrate until the reagent is decolorized. If lactic is present a light yellow or citron color is left.

For starch digestion a few cc. of Lugol's solution is added to ten cc. of the filtrate. The extent of digestion is indicated by the color as noted above.

The more completely the digestion has gone on, the less albumen there will be present. Take four or five cc. of the filtrate and boil over a Bunsen burner. If albumen is present a flocculent precipitate will be thrown down. Neutralize by adding a weak solution of caustic

soda, which precipitates syntonin. Then filter contents of the tube to get rid of the albumen and syntonin. Add to the filtrate an equal quantity of common salt solution and shake well. If propeptone is present, it will be precipitated. The addition of a few drops of commercial acetic acid will reveal flocculent masses. To test for peptone, filter out any propeptone that may have been found and proceed with the filtrate as follows: Render the liquid decidedly alkaline by adding four or five drops of sodium hydroxide solution. Add also one to two drops of a one-percent copper sulphate solution and if peptone is present, a rose red or strawberry color is produced.

To test for pepsin, prepare two small test tubes holding about five cc. Fill both with the filtrate. To one add a few drops of dilute HCl. Then place in each a small cube of albumen. I usually use glass tubes of egg albumen which can be prepared in large quantities after the following method: Take small glass tubing two mm. in diameter, fill with the white of egg and boil. Place these in a fifty-percent glycerine solution. Wash thoroughly before using. When making the test for pepsin, break off about one cm. of the tubing and place in the test tubes holding the filtrates. These are put into an incubator and kept at thirty-seven degrees C. for six hours. One can judge the rapidity of digestion in each of these tubes much better in this way than by using the ordinary cubes of albumen. The albumen should be digested in from five to six hours. This is one of the three tests that takes more than fifteen minutes.

The rennet test is as follows: Neutralize about five cc. of the filtrate with sodium hydroxide solution. Add five cc. of milk. If rennen is present a thick coagulum will be formed in fifteen to twenty minutes. The less rennen there is present, the longer it will take for the coagulum to form.

There are many tests for occult blood, —some are too accurate and others are not accurate enough. The following is one of the best and most practical tests called Adler's benzidin test. The reagent consists of a concentrated solution of benzidin in glacial acetic acid which is made by adding as much of the benzidin as can be taken on the point of a knife to two cc. of the acid. Ten drops of this solution are added to three cc. of a three-percent solution of H_2O_2 . A portion of the stomach contents about the size of a pea is rubbed up with a little water in a test tube and the mixture is brought to a boil. To the mixture of the reagent, two or three drops of the emulsion of the stomach contents is added. If blood is present, a green or bluish green color results, usually in a few seconds.

Fecal Analysis.

Much less is being, or has been, done by the practitioner along the lines of the examination of the feces because of the distaste of the physician for this kind of work and the prudery of the public.

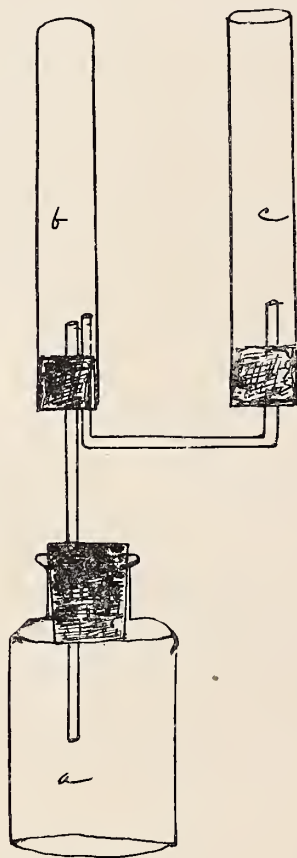
At the first visit I have the patient bring an ordinary or characteristic stool. This stool is thoroughly mixed, note being taken of the odor, color, form and consistency. A small amount of the feces, about the size of a walnut, or five grammes, is rubbed up in a mortar with enough sterile water to make a thin fluid.

To test for bile pigment, take five cc. of the fluid feces and place it into a small beaker. Pour into the beaker enough of the concentrated watery solution of bichloride of mercury to cover the feces. If bilirubin is present, a blood-red color will appear in about twenty-four hours. The more decomposition there is going on in the bowel the less red will be the reaction. If the fecal matter is passing through the bowel

very rapidly, green colored particles will be found scattered through the preparation.

The test for occult blood is the same as has been explained in testing for blood in the stomach examination, a small amount of feces, about the size of a pea, being used. The patient should not take any meat for at least two days preceding this test.

To determine the reaction of the feces a piece of blue and red litmus paper is



placed upon, not in, the feces. The reaction of normal feces is amphoteric or slightly alkaline or acid.

The fermentation test to determine the extent and kind of decomposition is as follows: Take a small amount of the feces, about the size of a walnut, and place it in the lower vessel of Dr.

Strasburger's fermentation tube (see cut No. 1). Fill this with water and stir thoroughly. If the reaction of the feces is acid, determine the acidity quantitatively by adding a drop of phenol phthalein solution to one cc. and titrate. Now place the stopper in the lower vessel, fill the test tube marked "B" with water and place it in position. Put this fermentation tube in an incubator at thirty-seven degrees C. and leave for twenty-four hours. If fermentation or putrefaction has taken place, water will be displaced in tube "C" according to the intensity. If the tube is filled to one-third or more of its capacity, the amount of gas is pathologic. To determine whether putrefaction of albuminous matter or fermentation of carbohydrates has taken place, test the acidity. If higher than the initial acidity, carbohydrate fermentation has taken place; if lower than the initial acidity, or if the reaction has become alkaline, albuminous putrefaction has obtained.

Next a small drop of the fecal emulsion is placed on a glass slide and covered with a cover glass and examined microscopically. In this are seen fragments of muscle cells, salts of calcium, colorless soaps, potato cells, and chaffy remains. If now we run under the edge of the glass a few drops of Lugol's solution, the preparation assumes a brown color, macroscopically, and when viewed through a microscope, unchanged starch granules appear blue or violet and isolated fungus spores are blue-violet in color. Now take a small drop of the fecal emulsion, place on a slide and add a drop of thirty per cent acetic acid. Heat until it begins to boil. Drop on a cover glass and examine. This serves to melt the fat content. After cooling there are seen small flakes of fatty acid scattered throughout the field. If this is again heated carefully, the fat is congealed into drops. If the needles of fatty acid and drops are numerous, there is a

pathologic decrease in the emulsification and absorption of fats in the intestines.

Urinalysis.

There are two tests that I want to lay particular stress upon besides those for albumin, sugar and specific gravity and the microscopical examination which are too well known to discuss at this time. These tests are for indican and the reaction. For a considerable period of time I have been investigating the reaction of urine and am convinced that it is very, very rare, except in case of urine that has stood a long time, to find an alkaline urine. To be sure, the acidity varies within wide limits. The normal acidity of urine is about thirty, using phenolphthalein as an indicator and titrating with sodium hydroxide solution. It is more particularly the relation of the secretion of HCl in the stomach and the acidity of the urine that I want to speak. If you take a specimen of the urine passed one hour before the morning meal and another passed an hour after dinner, or the noon meal, and determine the acidity of each, you will find that in the normal stomach there will be a slight falling off in the acidity of the after-dinner specimen. Now, in case of hypochlorhydria in taking the acidity of the after-dinner specimen you will find quite a marked increase, while in hyperchlorhydria the acidity will show a greater falling off than normal. Practically, the application of this examination will preclude the necessity of passing the stomach tube in case there are any contraindications for its use.

The other test for determining the amount of absorption of poisonous substances by the bowel to show whether the peristaltic action is decreased, is called Jaffe's test for indoxyl. To twenty cc. of the urine in a test tube add an equal quantity of concentrated HCL, a

few cc. of chloroform, then drop by drop a dilute solution of sodium hypochlorite. Shake after the addition of each drop. Do not add an excess. The chloroform gradually turns blue if indol is present. A pink color sometimes results because of the previous administration of the iodides or santonin.

Bile may be tested for in the urine by running a few cc. of fuming nitric acid over the top of some of the urine placed in a watch glass. A play of colors from a green to golden yellow will result if bile is present.

These are tests that can be carried

out by anyone who desires to do good, thorough work. No expensive apparatus is required other than a good microscope. All the reagents used can be obtained from any reliable wholesale drug house. After a little practice and experience, the tests can be performed very rapidly and accurately in a remarkably short space of time.

In doing this kind of work, one feels a great satisfaction in knowing that he is doing accurate work in diagnosis, and that he is leaving no stone unturned, however small, for the good that may accrue to his patient.

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DISCUSSION.

Dr. Herrick, of Chicago, said that simplicity in laboratory technique should be encouraged but accuracy was of the first importance.

Dr. Dock, Ann Arbor. The method of stomach examination described is a proper one. In functional diseases examination should be made under different conditions and repeatedly. It is a good plan to examine the fasting stomach, and also after a full meal. The latter is important as it shows the power of digestion. Examination of stools is very much neglected. As far as possible they should be examined freshly passed and should not be mixed with urine. The best way is to have the stool passed in the office. Usually it may be obtained by giving a glycerine suppository. Examination of the undigested stool is of

value. It is obtained by taking Carlsbad Salts before breakfast. By examination in this way Dr. Dock was able to discover two cases of amœbic dysentery. The acidity of the urine comes from so many different causes that its estimation is not of much value and may be misleading.

Dr. Freund, Ann Arbor, said that the use of alizarine in estimation of stomach contents is of doubtful value. Examination for motor power should be included in every such examination.

Dr. Enders, Eaton Rapids, in conclusion said that title was used as a decoy. He believed that accuracy was of more importance than rapidity in diagnosis. In examination of stools he believed most could be learned from test diet.

A swelling in the inguinal region, painful to the touch is, of course, often an inguinal adenitis (*e. g.*, following gonorrhea). But orchitis in an undescended testicle should be kept in mind.—*American Journal of Surgery*.

To determine how soon a patient's mucous membrane, *e. g.*, of the mouth or urethra, becomes insensitive after the application of cocain, or other anesthetic, the surgeon may employ the device of touching a little of the same solution

to his own tongue, just after the application to the patient.—*American Journal of Surgery*.

A peripleuritic abscess due to caries of a rib may give all the signs and symptoms of an encapsulated empyema. Aspiration of the chest usually withdraws clear fluid (an effusion due to the inflammatory process). A positive diagnosis can be made only by exploration of the abscess cavity, when a necrosed rib may be found overlying a thick-walled abscess cavity.—*American Journal of Surgery*.

ABDOMINAL PAIN; ITS DIAGNOSTIC SIGNIFICANCE.*

H. W. YATES, M. D.,
Detroit.

With full knowledge that many of the pains felt in the abdomen are sympathetic and with no desire to refute it, the object of this brief paper is to call attention to the somatic distribution of the cerebro-spinal system. Rationally and carefully studied, many of the pains which have been thought reflex are but expressions of discomfort in some terminal nerve supply of this same system.

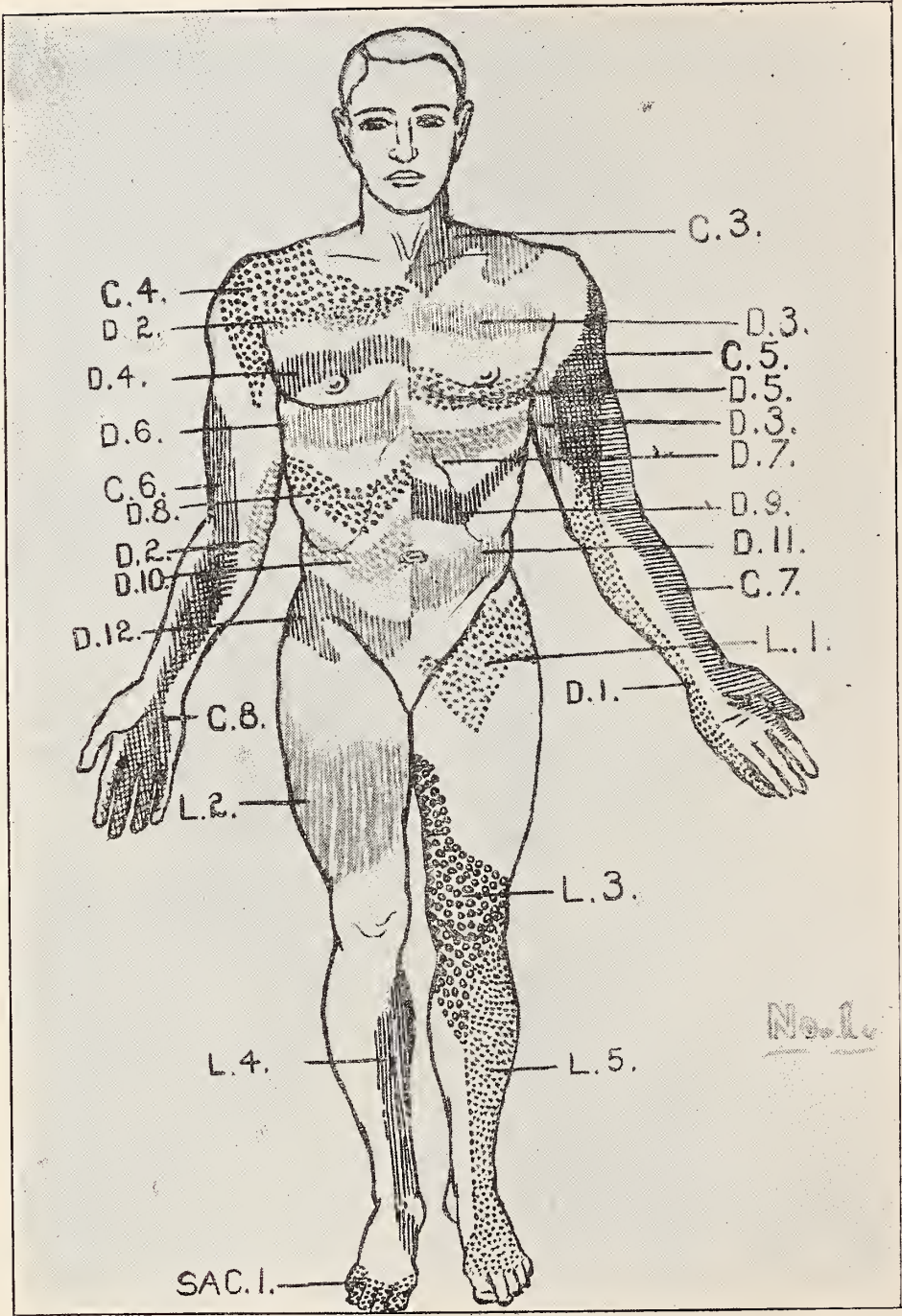
If we but review in our own mind the cerebro-spinal system, we will see that it includes the brain, the cord, and spinal nerves coming from it in 31 pairs,—that these latter proceed outward nearly horizontally from the upper segments of the cord, becoming more and more vertical in their course as we go down. Thus the cervical set give supply to the back of the head and neck, to the clavicle, shoulder and arm, but as we look at the dorsal nerves we find the body surface area is supplied as low down as the inguinal region, and that the lumbar and sacral give supply all the way down the leg and to the foot. Therefore, if there be any actual disease of the cord or vertebra in the dorsal region, the resulting pain in the lower anterior abdomen has this anatomical explanation. Caries of the spine (dorsal) with resulting pressure upon the nerves, and *Tabs dorsalis* are familiar illustrations.

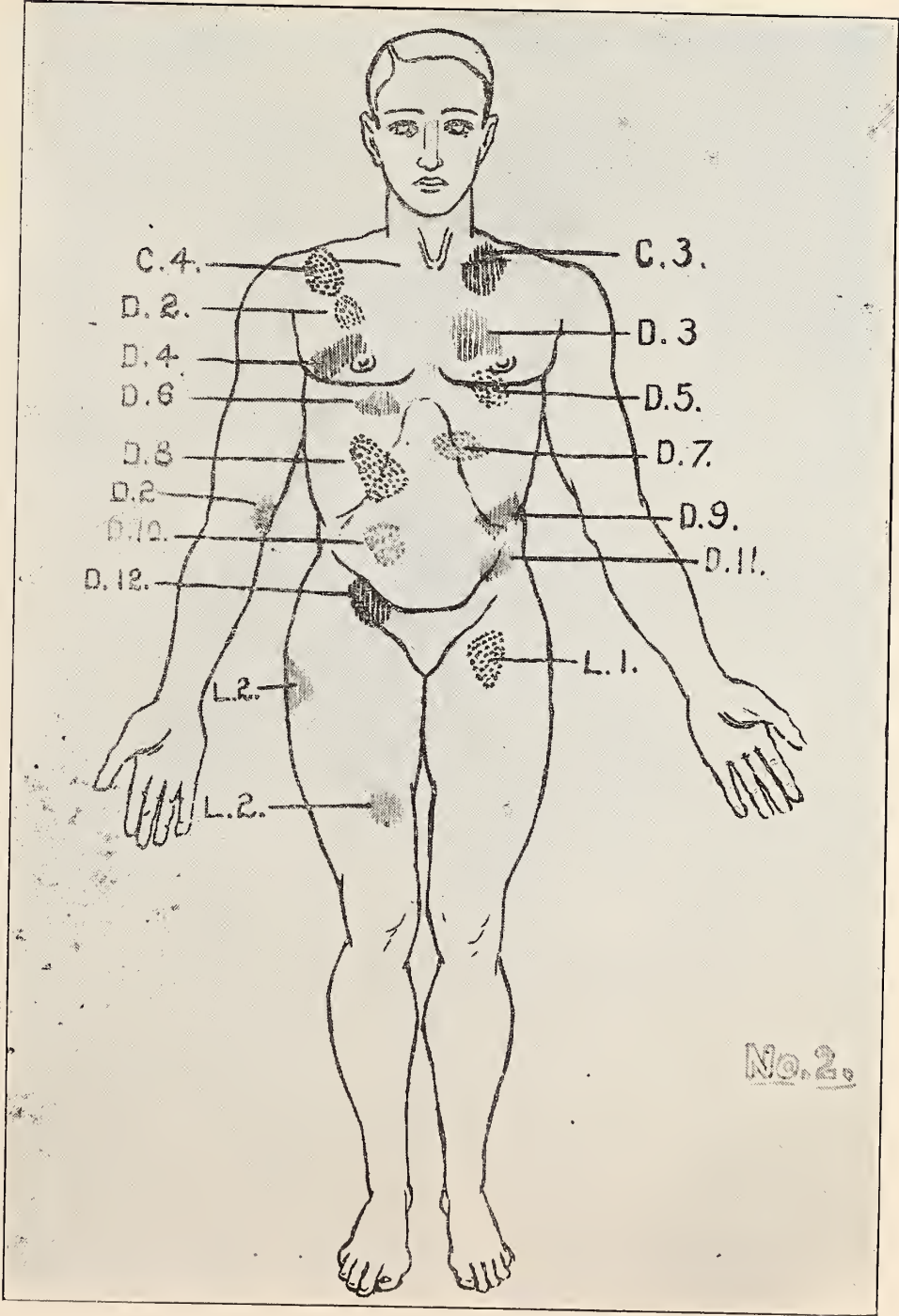
In studying abdominal pain, it would be a nicely arranged plan if each viscus would give its outcry in a certain distinct place, but this cannot be, so long as the great solar plexus gives supply

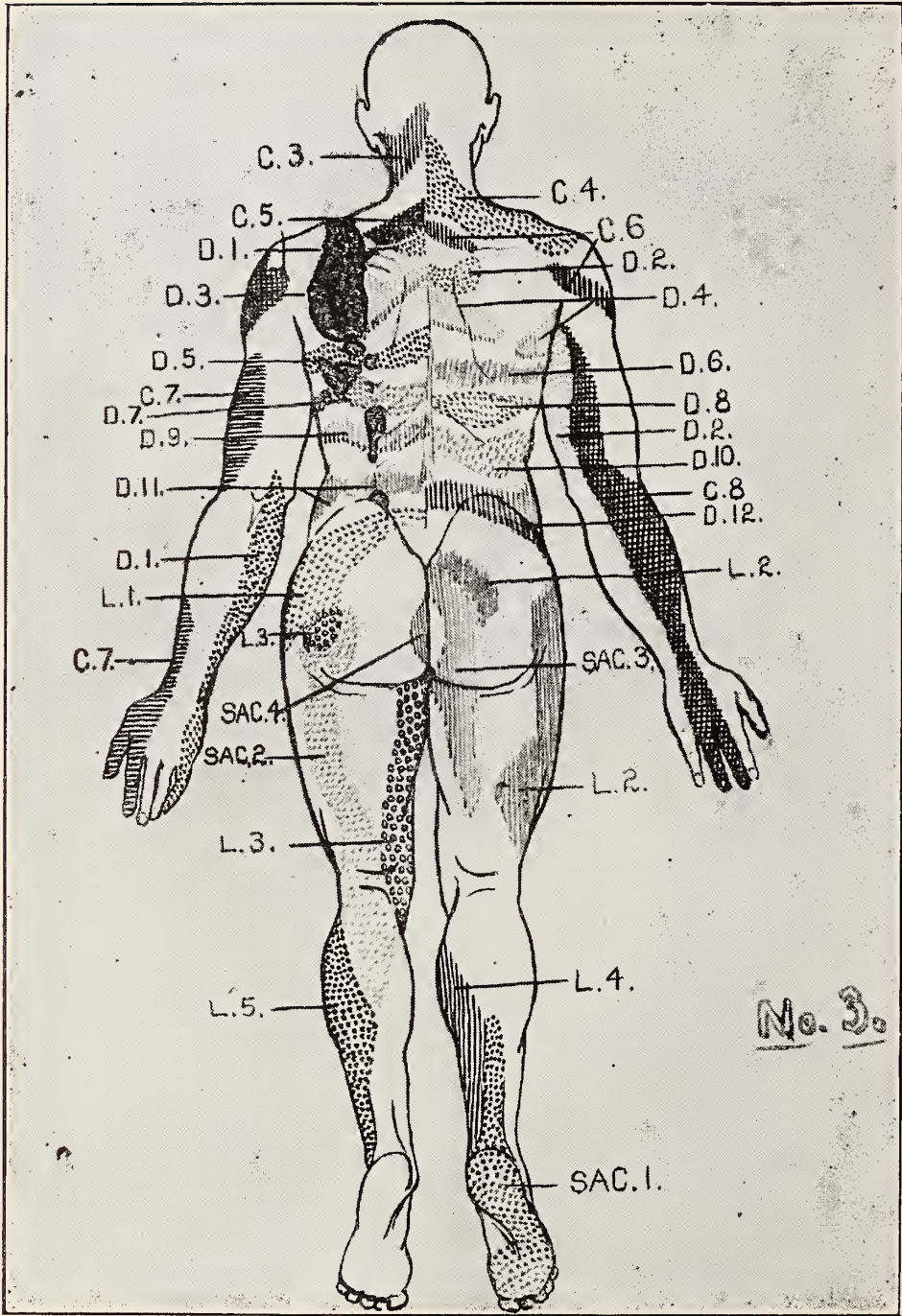
either directly or indirectly to nearly every organ in this cavity; but the more richly supplied any organ or part is with the cerebro-spinal system of nerves, just in that proportion is the organ or part more sensitive to pain. As an illustration, much of the visceral peritoneum may be inflamed and with comparatively little discomfort, but let the parietal layer be the seat of invasion and "That deep torture may be called a Hell, when one can feel more than he hath the power to tell." Every operating surgeon knows that he may handle the viscera without causing pain, but to touch the serous lining of abdominal parietes is at once to cause acute pain. Of course, this brings up the argument which has been so ably discussed by Ross, Head, MacKenzie et al., as to whether any of the abdominal organs are appreciative of pain, or whether it is only manifest in the muscles, peritoneum and areolar tissue surrounding them. Assuming that pain is the result of over-stimulation or under-functional activity, it is difficult not to regard the sensation as produced and actually felt at the seat of its origin. That it is often reflected, or referred, all would agree.

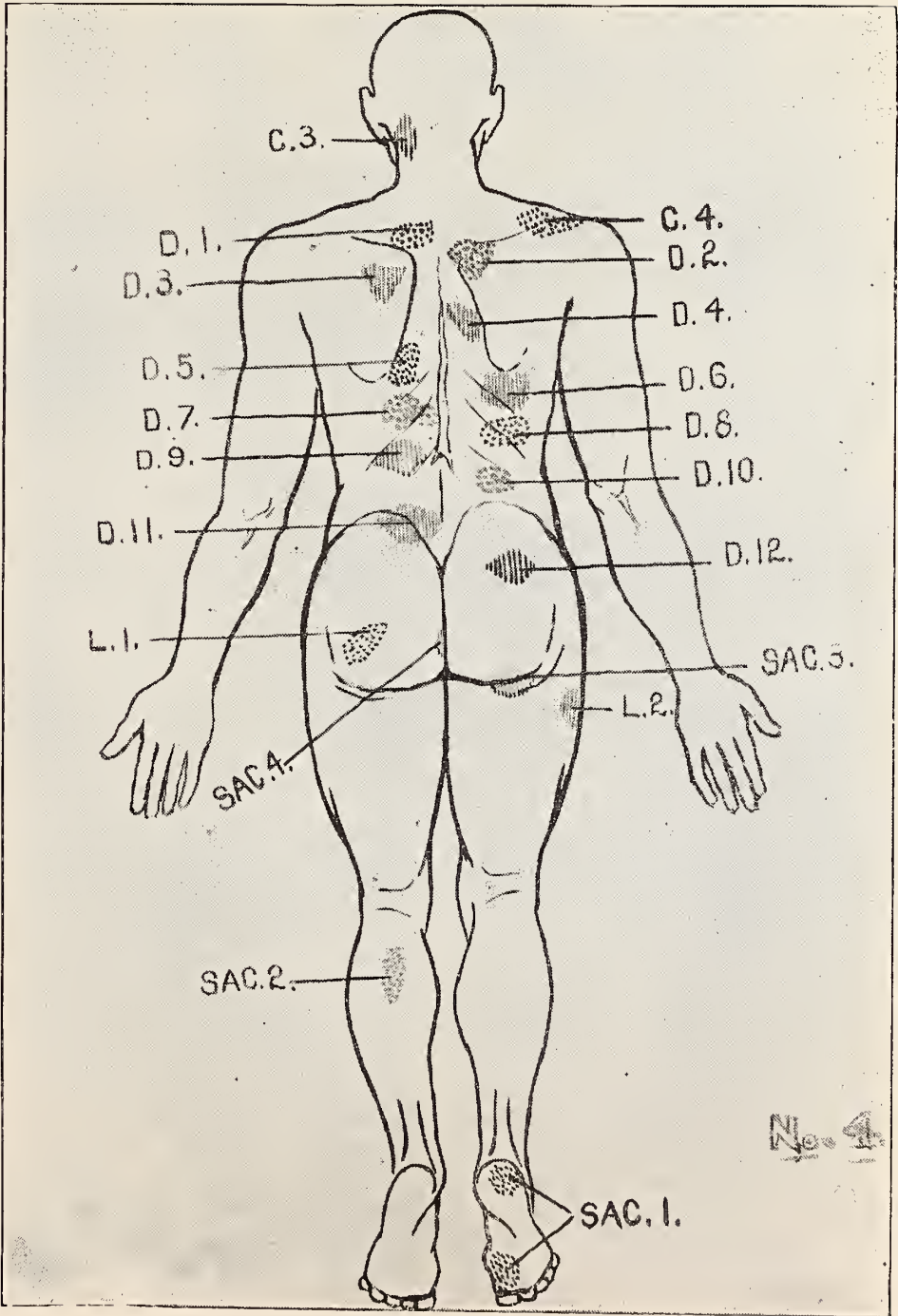
Pain in any part, when not associated with increase of temperature (the local symptom of local inflammation), must be looked upon as caused by an exalted sensitiveness of the nerves of the part, and as a pain depending upon a cause situated remotely from the part where it is felt. In availing ourselves of these so-called sympathetic pains (and no doubt they are in a certain sense "sympathetic pains"), I should like to displace

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or throw aside the term "sympathetic" as something too ideal, and would ask you to consider such pains in their obvious, intelligible and more natural relation. I would ask you to regard them as resulting from some direct nervous communication passing between the part where the pains are expressed and the real and remotely situated cause of the pain.

If the pain be manifested in any distinct area, and no signs of local inflammation be present, it should be our duty to follow that cerebro-spinal nerve centripetally to its origin. Studying its complete distribution, we shall in all probability discover the original and producing cause of pain, and thus adopt a correct diagnosis. It is not fair to ourselves or our patient to explain away his pains by the words, rheumatism, cold, neuralgia, etc., when there is rational explanation offered by nerve distribution,—and so it is equally fallacious to find explanation for our ignorance in the words "reflex," "sympathetic," etc. True, it is not always possible to surely determine the origin of pain, but the word "sympathetic" is too freely used as a cloak either for ignorance or laziness. Many diseases of the abdominal viscera are associated with pain in different portions of the integument, and their causes are usually cast aside by the word "sympathetic." Since this is so common, let us for a moment see if there is not a satisfactory and intelligible explanation for this phenomenon in the nerve distribution. The pain felt in the infra- and inter-scapular regions when associated with visceral disease of the upper abdomen is common. This pain must be connected with the distribution of some of the spinal nerves, because no other structures could express the pain, and no other nerves occupy the position except the fourth, fifth and sixth dorsal nerves which are distributed over the inferior angles of the scapulæ and inter-scapular

space; hence we must conclude that these nerves are the immediate seat of the pain. If we trace internally the great splanchnic nerve from within the thorax downward, and find it connected at its abdominal end with the solar plexus, thence trace its distribution to the stomach, duodenum, liver and pancreas; and if we follow the other or upper end of the same great splanchnic upwards to the fourth, fifth and sixth dorsal nerves, which give peripheral sensitive filaments to the integument over the angles of the scapulæ, to the interscapular spaces and adjoining skin, we can well imagine that these nerves carrying the influence upwards and backwards may explain the occurrences of pain sometimes experienced in those external parts associated with abdominal visceral disease. As Hilton well says, "Is it not likely, then, that the pain which persons experience in diseases of these viscera may be explained by the relative position of the great splanchnic nerve, communicating on the one hand with the solar plexus, and thence with these digestive organs, and on the other, distributing the branches to the fourth, fifth and sixth dorsal nerves."

Probably all of us have noted (and perhaps some of us have been chagrined at our mistakes) in cases of acute lobar pneumonia where the pain was entirely referred to the abdomen as far down as the iliac region at times, with the abdomen exceedingly sensitive to touch. Such cases have not infrequently been referred to the surgeon for celiotomy. Several of such have been reported. If we will remember that the pleuræ line the upper surface of the diaphragm and the inner surfaces of the lower ribs, it will be at once understood how pain may be conducted by the lower intercostal nerves and felt in the front of the abdomen; that is to say, as if localized at the peripheral termination of those nerves.

On Sunday of this week I was called to see Miss M—, aged 40 years, who had considerable pain on pressure over the appendix and also over the left dorsal region. Now, if we examine charts 1, 2, and 3, and study the body surface or somatic nerve supply, we find absolutely the same segment in the spinal cord that gives supply to the appendix, to the area above it, and to the posterior region referred to, and since my patient has no other illness or discomfort to cause this dorsal pain, is it not plausible that this is its origin?

Not one of us has a day go by that some of our female patients who have ovarian or uterine disease do not complain of dorsal pain. Especially is this true in young women whose generative organs are functionally active and who are free from gross organic defect. Examination only shows an irritable condition, and yet the constant complaint of backache finds its explanation in charts 1, 2, and 3, not by the phantom-chasing term "reflex irritability," but alone by the conduction of an impulse down the

dorsal nerves. The frequency of pain under the scapula in gall-bladder and duct diseases is common. As long as inflammation of gall bladder alone is present, the patient complains of pain being general over the epigastrium and over back supplied by dorsal nerves. But if stones be present and one becomes impacted in the duct and sets up sharp peristalsis, then the pain is more localized at chart 4, dorsal 6, and chart 2, dorsal 6.

Pain felt exactly at the ninth right costal cartilage is strongly suggestive of an inflamed, impacted or cancerous gall bladder, or a stone lodged in the common duct.

It is apparent to the Section that the writer had no thought in the preparation of this paper of any question of differential diagnosis between diseased abdominal viscera, nor did he desire to open this field, but if either by diagram or by text he has stimulated some to familiarize themselves with the causes of pain and distributions of the somatic branches of the cerebro-spinal system of nerves, his object will have been attained.

Burnham's Soluble Iodin.—An analysis of Burnham's soluble iodine, according to its manufacturers one of the most notable discoveries of the age, made by W. A. Puckner and A. H. Clark in the Laboratory of the American Medical Association, is published in *The Journal A. M. A.*, March 28. The results, which agree with those obtained by Wilbert and others (*Proc. Am. Pharm. Assn.*, 1903, li, 409), indicate that Burnham's soluble iodine is a solution of iodine in alcohol made miscible with water by the presence of some iodide. It is true that this is not potassium iodide and is not, entirely at least, hydrogen iodide (hydriodic acid), but this is of slight importance compared with the fact that it is a solution in alcohol of free iodine and an iodide and, therefore, is essentially the same as Lugol's solution. It is of interest also to note that the amount of free iodine is not constant; analysis showed that one specimen, after standing for a month, contained nearly 40 per cent more free iodine than it did when first purchased. The amount of iodine found corresponds approximately to 3.0 gm. of free

iodine and 2.0 gm. of combined iodine in 100 c. c. of the solution. Lugol's solution contains 5.0 gm. of free iodine and 10.0 gm. potassium iodide in 100 c. c. Burnham's soluble iodine tablets, each said to contain three minims of Burnham's soluble iodine, were also analyzed. The details of this analysis are also given and it shows that the tablets contain approximately one-fourth the amount of free iodine and approximately two-thirds the amount of total iodine that should be contained to agree with the label. In commenting on the above results, the authors say that the outcome of the analyses is not a surprise, since the extravagant claims made by the Burnham Soluble Iodine Company are enough to condemn their product. Physicians will be perfectly justified in looking with suspicion on all such unscientific claims of specially important secrets possessed only by drug manufacturers, especially when not substantiated by painstaking analyses. Whether it is desired to administer free iodine. Lugol's solution (*Liquor Iodi Compositus*, U. S. P., *Physician's Manual*, p. 84) is an inexpensive and perfectly available preparation.

CHRONIC INTERSTITIAL NEPHRITIS AND ITS RELATION TO RE-CURRING PARALYSIS.*

BENJAMIN A. SHEPARD, M. D.,
Plainwell.

It is a very favorable sign of progress that we see in the attention which the profession is giving today to the signs of cardio-vascular and renal degeneration, that condition which is responsible for the ushering of quite as many into eternity as many of the contagious diseases which have received so much attention from active workers. The more we consider chronic hyper-tension the sooner will a large class of cases receive their proper attention from the profession and the more will we look beyond this symptom for the causal factor, which, by judicious work, may often be removed. The conception today of the pathology of chronic interstitial nephritis is broader and more comprehensive than a few decades ago. It is a complex disease, and not only are the kidneys often a secondary development, but they are often entirely overlooked in their clinical manifestations. The word-picture of the disease, as given by some, would lead one to think that it consisted of nothing more nor less than an interstitial inflammation of the kidneys. Today a clearer and more comprehensive conception of the disease shows it to be one of slow chronic inflammatory change, resulting in a growth of connective tissues in the stroma and atrophy of the renal parenchyma with marked changes in the cardio-vascular system.

Considerable uncertainty and confusion has attended the attempts to arrive at an accurate conclusion in regard to the

etiology of the disease. Allbutt would divide the etiological factors of arterio-sclerosis into three divisions—first, that common to old people and not dependent on high tension; second, that due to persistent high tension or blood pressure, and in other words mechanical; third, that due to toxins. Personally, I think all of these causes may be traced to a common primary cause, namely, toxic.

Henry W. Cook, of Richmond, Va., in his article in the *Journal of the American Medical Association* for January 28, 1905, would insist on the absolute distinction between arterio-sclerosis and hypertension, but if those cases of hypertension are followed for a period of time, almost invariably will manifestations of sclerosis show themselves, and it should be remembered that the peripheral blood vessels are not always the first to undergo the change, and that an extensive splanchnic sclerosis may be present without superficial evidences.

The argument that chronic hypertension is a functional disease is beyond my conception. Again, it is claimed that hypertension favors and may even induce the development of arterio-sclerosis, but etiological parallels do not bear out the statement. Overwork in other tissues with no irritating material will not cause sclerosis in other parts, and it does not seem reasonable to expect that it will in the cardio-vascular system. There is one point upon which most clinicians agree, and that is that the constant factor is the continual demand on

*Read at the Saginaw meeting of the Michigan State Medical Society, May 15, 16, 1907, and approved for publication by the Publication Committee.

the kidney to excrete some irritating material. What this material is or may be we are not sure: it is noted in alcoholics, syphilitics, and here is where possibly the hereditary nephritis of some writers may come in, those whose diet is largely made up of uric acid producing materials, including in this sufferers from gout and allied diseases. Workers who are constantly subjected to contact with metallic substances should be considered. By some tobacco is claimed to be a causal factor in raising the blood pressure and the termination in arterio-sclerosis. The toxins contained in the blood in the different diseases of the excretory organs may be the source. It is probable that the American habit of constipation, by its throwing into the blood urobilin and other products of the bowel, is a very potent factor. Another habit I would mention as a causal factor is the vicious drug habit, and by this I would include the insane use of proprietary or the so-called patent medicines which often contain materials which by their constant use may cause a sclerosis or produce the initiative for it. It is not to be questioned but that the different toxins may cause persistent hypertension, but it is the persistence of the cause rather than the symptom that produces the sclerotic change. Whether or not the increased metabolic changes due to the rapid and increased nerve strain of Americans of today is a factor in producing the change, it is one in hastening results.

The pathology of the disease includes either directly or indirectly every organ in the body. In order to fully agree upon the pathological possibilities of arterio-sclerosis in the kidneys it is important that we bear in mind the anatomy and the manner in which they functionate, and also what we mean by the term arterio-sclerosis. In considering the method of excretion by the kidneys we find two long mooted questions or

theories, either of which has been heralded as the antithesis of the other. This I believe to be wrong, for we must admit with Ludwig that since the efferent blood vessel of the glomerulus is smaller than the afferent, and since experiments show that there are no nerves going to the kidney that directly affect the excretion of urine, but that the increased flow of urine from stimulation can be traced to the resulting increase in the blood pressure, we must agree with Ludwig that the increased blood pressure may explain in part the excretion of urine; but to stop here would be erroneous, for it has been proved that it does not only depend upon the blood pressure but also on the blood flow, for when the efferent blood vessel is tied the amount of excretion is lessened. To differentiate or tell exactly what part the cells of the glomeruli and those of the tubules play is as yet impossible, but it is probable that they have a great deal in common. Some diuretics act by increasing the blood flow and others by their direct action on the renal epithelial cells.

Thus we see the pathological importance of a condition which will harden both the efferent and the afferent blood vessels with the consequent results on the blood pressure and excretion. Cohnheim tells us that in the kidneys the blood vessels do not contract and dilate according to the needs of the organ as in other parts of the body, but according to the excretory matter in the blood. If this power of contraction and dilation is lessened or destroyed we can easily see how constitutional effects may follow. Ewald asserts the compensatory excretion of urea by the secretory glands of the stomach to be a frequent cause of gastritis. Nature attempts to compensate for the loss of power of raising the blood pressure by cardiac hypertrophy, and excessive pressure is brought to bear that the usual amount of blood shall

pass through the restricted capillary area; hence we have increased blood pressure throughout the system, and with the diseased coats we see the possible results in the brain, and it is here that I wish to especially call your attention later.

Sclerosis is the climax of all pathogenic processes that have entered into the life of the individual, and we are thus forced to see that it is the resulting cicatrix of cellular degeneration and not an entity as we are so prone to regard it. Chronic interstitial nephritis is always primarily of epithelial origin, and its extension to the deeper structures is measured by the depth to which the primary destructive agent reaches. Formerly two types of nephritis were recognized, viz., epithelial and interstitial. Now we know that all forms of nephritis begin in the epithelial cells. One where the epithelial cells of the excretory apparatus predominate; the other where sclerotic changes take place. The starting point is the same, but the results differ because the processes differ. This can be traced to the primary cause. In the former the exciting cause is more acute and vicious, but not persistent; while in the latter the continual demand on the kidney to excrete an irritating material is the most constant factor.

One of the most common initial symptoms given by the patient is dizziness, together with restlessness at night, frequent micturition, especially at night; gastric disturbances may be a marked symptom; dyspnea is often one of the primary subjective manifestations, and may be of an asthmatic character, and a true cardiac asthma may be encountered; hemicrania in patients above the age of forty should arouse one's suspicions. In my own experience I have found the symptomatology so varied that a well classified list cannot be made, but every case should be thoroughly examined for arterial and cardiac changes. The hard-

ened arteries—keeping in mind that not every case shows peripheral sclerosis—the high arterial tension with apex beat displaced to the left, an accentuated second sound with a metallic ringing quality, together with increased excretion of urine with a lowered specific gravity form a basis for a diagnosis. The findings in the urine are so inconsistent that too much importance should not be placed upon it, except that the decreased amount of urea and the lowered specific gravity are almost constant and important symptoms, and though hyaline casts and albumin may be found at times we cannot depend upon it. I would be omitting one of the most important aids in diagnosis if I did not mention the ocular symptoms and findings, and I cannot too strongly urge the careful examination by a competent oculist in every doubtful case.

The results of the disease are most often seen in the brain, and it is some of the possibilities here that I wish to emphasize, and to do this I have chosen two cases to report which I believe will best illustrate the two different ways by which the brain may be transiently affected.

Case 1: N. K., male, age 75, retired minister of the gospel, family history negative, had been troubled with muscular rheumatism for a considerable number of years, gave history that for some time he had felt languid and weak, eye sight had deteriorated considerably, some trouble with digestion, did not sleep well nights, frequent micturition especially nights, urine analysis showed a lowered specific gravity, urea about nine parts to the thousand, no albumin at any time. Jan. 10, 1906, he lost the use of the left side, but only for a few moments, but the next day I was called because of a recurrence of the symptoms. Upon my arrival he had regained full control of himself, the pulse was full and hard and 85 per minute, temperature normal, pupils normal, tongue coated with a dirty grayish coating, breath offensive but not urinous, arteriosclerosis marked in all peripheral arteries. The attacks became more frequent and pronounced,

the left side of the face and tongue being involved. Complete paralysis of the left side occurred at least thirty different times and lasted from five minutes to an hour.

Case 2: Mrs. R. G., I saw in consultation and I use it to show the still more transient effects. Age, 70; eyesight impaired, loss of appetite, with symptoms of gastritis; strong build and arteries hard to palpate, but could find no marked hardening of the radials or superficial blood vessels, accentuated second sound with a metallic click, arcus senilis developing, urine analysis showed a specific gravity of 1012, urea eight parts to the thousand. The first manifestation of trouble to the patient was when she suddenly became dizzy and fell to the floor, but was soon restored and apparently all right; since that time she has had several attacks of a similar nature but to a lesser degree. Of late the patient has been growing weaker and complained of dyspnea upon exertion.

In either case a diagnosis of chronic interstitial nephritis was made, though a different result was believed to be present in each case. In the former the symptoms were due to pressure, probably both venous and arterial, with the exciting cause, uremia, and this is an example of that class of cases where we see the toxic and the mechanical working together. Wilson, of Philadelphia, has shown that the effect may be localized. In the second case the symptoms point towards uremia alone. Thus there may exist a local action of the toxin on the motor centers, or there may exist a toxemia with increased pressure from the fluids and possibly causing an edema.

It is probable that the toxemia always precedes the increased tension and fluid pressure from the arteries, veins, and lymphatic vessels.

The line of treatment depends upon the urgency of the case, or, in other words, upon the length of time which the condition of the patient will give in which to relieve the cerebral symptoms. Efforts must be directed toward elimination and relief of the pressure. For the latter, Wilson reports good results

in a series of cases treated by lumbar puncture. One should not depend on slow medication, as only prompt elimination will be of service in many cases. The bowels and skin are the sources available except that free bleeding appeals for a place of importance and is a rational procedure in emergency. Drop doses of croton oil placed on the back of the tongue will be taken whether the patient can swallow or not, one dram of a saturated solution of magnesium sulphate every fifteen minutes till free catharsis is induced. At the same time free diaphoresis should be produced by hot packs and the blood pressure brought and held down, for which purpose I prefer aconite, though often the nitrates give results and are chosen by some. Some have advocated the so-called "washing the blood" with saline injections, but in this way the opposite result from that desired is obtained and for a time the blood pressure is increased, and for the same reason rectal injections should be used with caution.

It is difficult to combat the development of the sclerotic changes, as it is hard to remove the cause or irritating material. Only one medicine seems to give us any results in arresting the advance of the disease. I give moderate doses of potassium iodide well diluted in water after each meal for three weeks, then after an interval of two weeks I again have it continued and with these interruptions it is continued for a long period of time. In some cases I believe I have accomplished results, but this has been only a part of the treatment and perhaps a small part. The patient has been forced to see the necessity of an absolutely moderate life; what I mean by the term "absolutely moderate" is that there shall be no intermissions when the daily routine of moderation in everything shall be broken and, if necessary, the possible results are portrayed. Moderate exercise, but not to the point

of fatigue, with clothing which will protect the body from the sudden changes so characteristic of our climate, or, better still, where possible removal to an equable climate are very important factors. The bowels should be kept regular—I order an occasional dose of magnesium sulphate which unloads the system to a good advantage. The skin is a great factor in renal compensation and should have careful attention.

The diet should consist only of light, nourishing and easily digested food with only a small percentage of meats. Water

should be taken freely, either distilled, or some of the mineral waters, but owing to the difficulty in obtaining, they are in the minds of some people out of their reach. Alcohol even in moderate amounts should be forbidden. In short, the whole effort should be to assist nature in establishing and maintaining a condition of compensation.

For the direct effect on the kidneys citrate of potassium seems to give the best result and should be given freely to stimulate the renal cells.

DISCUSSION.

Dr. Smithies, Ann Arbor, complimented the paper and said that he considered the estimation of blood pressure of considerable prognostic value. He mentioned a case illustrative of this point in which there was a rapid rise in pressure, followed by a partial hemiplegia. The recording of one blood pressure is of little value, but persistent observations reveal many things. The

observation should be made under similar conditions and recorded very much in the same manner as one would record the temperature, pulse, and respirations.

In regard to drug treatment he preferred to use nitrites in preference to nitroglycerine, as the latter only produced a temporary effect and was more apt to cause disagreeable headache.

General Anesthesia.—O. J. CUNNINGHAM, Kansas City, Mo. (*Journal A. M. A.*, April 18), says that he has devised an apparatus for the administration of nitrous oxid and oxygen with the ether sequence, which embodies a number of new principles, and the superiority of which has been practically demonstrated in 924 operations during the past year. The advantages claimed are: If necessary, oxygen can be given pure or mixed at any time during the anesthesia or afterward to bring about a quick resuscitation. A few breaths of oxygen will completely relieve the occasional laryngeal spasm of incomplete anesthesia without decreasing the amount of ether being used. A special feature is that the gases and ether vapor are accurately measured under all conditions, allowing a perfectly even administration and thus adding to the safety of the patient and the convenience of the operator. By mixing oxygen in the proper proportions with nitrous oxid, complete narcosis can be maintained indefinitely and is used sufficiently long (from three to five minutes, occasionally longer) to permit ether to be administered gradually and slowly until complete ether narcosis is established. The swallowing of the ether-laden hypersecreted

mouth secretions is thus avoided, with its consequent nausea and vomiting. The danger of aspiration pneumonia is also thus lessened. The reduction of body heat by the ether, which is liable to occur under the ordinary methods, even in a warm atmosphere, is avoided by the combined employment of three methods: 1. The ether chamber is in a bath of 22 ounces of water, at about 90 F., a little below the boiling point of ether. 2. Ether, and the corresponding refrigeration, is saved by the quick induction of complete narcosis by nitrous oxid and oxygen. 3. Only the inhalation passes over the ether and not both inhalation and exhalation, as is the usual rule. This saves half the ether ordinarily used and also reduces refrigeration. Rebreathing, with its decreased oxygenation and increased carbonic acid is practically impossible with this apparatus. The apparatus complete (exclusive of the gas cylinders) weighs 20 pounds and can be carried in a case smaller than the usual suit case. The expense of anesthesia by this method is not excessive, and there are practically, he claims, no uncomfortable after effects. The apparatus is fully figured, with explanations of its parts,

RHEUMATISM IN CHILDREN*

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Rheumatism is now universally recognized by medical men as an infectious disease. The specific character of the infection, however, has not been conclusively proven. So many of the conditions formerly classed as rheumatic have been proven due to other infections that the term acute rheumatism or rheumatic fever now has a very restricted use; in fact, so restricted that not a few hold the view that such a disease, *per se*, does not exist, but that the symptoms are merely those produced by any of one of several different infections.

This view has not met with general acceptance, however, for after carefully eliminating those infections which are frequently followed by symptoms *very similar* to acute rheumatism, there still remains that familiar clinical picture, with its almost classical group of symptoms, which is termed acute rheumatism or rheumatic fever. These cases bear every indication of an infectious origin and the clinical course is so constant as to make it highly probable that this infection is of a specific character.

The bacteriology of this disease has been the subject of much investigation the past few years. The results of these investigations have been so thoroughly published that their repetition in detail is unnecessary at this time. It will suffice to simply again recall the fact that several investigators, working independently of each other, have succeeded in isolating from a number of cases of

acute rheumatic fever a *micrococcus*, which they have termed the *micrococcus rheumaticus*. This micrococcus differs in several characteristics from many of the common forms of cocci; and by inoculating lower animals with its cultures, some investigators have succeeded in producing conditions identical with those found in acute rheumatic fever, a result not frequently obtained with any of the other forms of cocci.

While these investigations have encouraged the belief that the micrococcus rheumaticus is the specific cause of rheumatic fever, yet the results of the different investigators have been far from uniform or constant. Different investigators have isolated micrococci in these cases which varied considerably in both culture and staining properties. Some have succeeded in producing symptoms of rheumatic fever in lower animals by inoculation of these germs, while others have failed. Others have failed entirely in their efforts to isolate a micrococcus, while none so far as I know have succeeded in finding the germ in all cases examined. These variable results leave the question in an unsettled state, but the consensus of opinion regarding the present etiological status of this disease is that it is of infectious origin, probably a specific one, and the evidence to date in favor of the micrococcus rheumaticus as the exciting cause.

The clinical picture of acute rheumatic infection in children differs in many respects from that which characterizes the adult type. These differences are only marked previous to ten years

*Read before the Northern Tri-State Medical Society, at Toledo, Ohio, January 14, 1908.

of age, however, after which the disease closely resembles that of the adult. Four variations of the disease are commonly met with in childhood, namely, acute arthritis, endocarditis, chorea and tonsillitis. To these may safely be added a fifth, the so-called growing pains which are usually of such a trivial character as to excite little attention, but which not infrequently may be a forerunner of more serious symptoms.

All of these conditions are not usually found in the same child, and when they do occur are spread over several years, but it is not uncommon to find in cases where it is possible to follow the life history of rheumatic children that at one time or another they have suffered with all these symptoms. The association of two or more of the symptoms is *extremely common*, however; in fact, such association is present in the large majority of cases.

The acute arthritis of rheumatic infection in children is mild compared with that in the adult, being of less severity, shorter duration and accompanied by much less constitutional disturbance. The symptoms are quite characteristic, the acute onset with pain and swelling of the affected joints, usually two or more being involved, extreme tenderness to pressure, together with more or less constitutional disturbance and fever. The fever is not usually very high, however, varying from 100° to 103° , in the majority of cases not going much above 102° . These cases in contradistinction to those of the adult are usually of but brief duration and rapidly subside under proper treatment.

The question of chorea in its relation to rheumatism is still open to criticism and will undoubtedly remain so until the specific infection in all these conditions is proven beyond reasonable doubt. Clinically, however, it bears a very close relation, which has long been recognized. One factor has ever stood promi-

nent in this relation and that is the frequency with which endocarditis follows or occurs during chorea. Again, the frequent history of attacks of arthritis, either preceding or following the chorea, is strong evidence of its being identical with or closely related to rheumatic infection. Whatever the future may disclose regarding the etiology of chorea, we should, in the light of our present knowledge, consider this disease a rheumatic infection and in every case be on our guard for other and possibly more serious symptoms.

Endocarditis is by far the most important manifestation of rheumatic infection in children, both by reason of its great frequency and the almost certainty of its leaving a permanently damaged heart. The endocardium of the young heart is especially vulnerable to this infection, much more so than that of the adult, and consequently endocarditis is far more frequent in childhood. It is present in such a large percentage of cases as to justify the statement that it is probably the most frequent and constant of all the different manifestations.

Proof of this point is furnished by the statistics of Dr. Charles Hunter Dunn of Boston, who, in a very excellent paper published in the *Journal of the American Medical Association*, Feb. 9, 1907, reported 300 cases of rheumatic fever in childhood. Of these 300 cases but 102 had arthritis on admission, while 140 had endocarditis and 58 pericarditis. Of these cases 223 were acute infections and 77 chronic. The most impressive point in this report regarding the frequency of endocarditis was the fact that of the entire 300 cases, 281 had at some time symptoms of endocarditis, and but 19 escaped.

The close association of rheumatic arthritis and endocarditis is so well known as to make its repetition superfluous, but the fact should be kept constantly in mind that the severity of the arthritis and the danger of endocarditis

developing are not commensurate. The fact is, not infrequently a severe endocarditis will develop in a child in whom the previous arthritis or other rheumatic manifestations have been very slight, or have escaped notice entirely. Indeed, in not a few cases the endocardial trouble is the first to claim attention. It would seem that in view of the present knowledge concerning the close relationship of these two conditions, that the child's heart would be the object of constant attention in every case of rheumatic arthritis, however slight. Unfortunately clinical experience teaches that such is not a fact and in altogether too large a number of cases the heart is neglected; with the result that an endocarditis develops undetected and is allowed to run its course, not being discovered until some later time when symptoms of acute dilatation direct attention to that organ. The lesson is clear and forcible. The heart of every child having any rheumatic manifestations whatsoever should be the object of frequent and careful examination, then a developing endocarditis will be detected in its incipency and properly met.

The onset of endocarditis is characterized by a rise in temperature, increased pulse, sometimes irregular or intermittent, and a murmur which is usually most marked at apex, inasmuch as the mitral is the valve involved in the majority of cases. Such a train of symptoms calls for immediate attention, the first of which is enforced, absolute rest.

The very common history of recurrent attacks of tonsilitis in rheumatic children has led authorities for many years to regard it in such cases as a rheumatic manifestation. With the development of the theory of infection attention was directed to the tonsil as the probable portal of entry, and while this fact, like others already mentioned, cannot be conclusively proven until the specific etiology of the disease is deter-

mined, yet the clinical evidence in its favor is very convincing. It is extremely common to find these children with a history of several attacks of tonsilitis, the last of which occurred shortly previous to an arthritis. Again, not infrequently a child will be found with endocarditis, either acute or chronic, the only previous history of which will be one or more attacks of tonsilitis.

It is true that every case of tonsilitis in a child does not signify rheumatic infection, and also equally true that both an endocarditis and arthritis may follow infection with a variety of germs, yet the numerous cases of tonsilitis followed by other rheumatic conditions justify the very probable belief that the tonsil is the portal of entry. Whether or not we accept this supposition, the fact remains that a child who is subject to recurrent attacks of tonsilitis has pathological tonsils, and such tonsils are always a menace to its life. The enlarged, spongy tonsil with its large crypts, occupying its position of constant exposure, is sure to be infected sooner or later, and once infected these crypts harbor the infection for a long time, keeping up a more or less constant absorption. In fact, many times a distinct pocket of pus will be found back of the tonsil at the base of one of these crypts, which when removed will relieve symptoms entirely foreign to the tonsil.

Many rheumatic children when examined will be found to have hypertrophied and pathological tonsils although there may have been no history of tonsilitis. It is therefore of the utmost importance to examine the throat in every case of rheumatic trouble and if the tonsils are found hypertrophied or diseased they should be thoroughly removed at once, unless there be an acute tonsilitis present, when, of course, a few days' delay would be necessary. Possibly in acute rheumatic conditions the operation should also be delayed until the more

acute symptoms have subsided, but with any tendency of the symptoms to become chronic or prolonged, enlarged tonsils should at once be removed; for, if left, absorption may continue and the disease prolonged indefinitely. A case occurring in my hospital service illustrates this point perfectly. This child had suffered with multiple arthritis for more than a year previous to the time she was admitted to the hospital. The condition was essentially chronic, with frequent acute exacerbations of the various joints. All medicinal treatment failed to give more than temporary relief. Attention was directed to the throat and examination revealed somewhat hypertrophied, soft, spongy tonsils. Under ether these were removed and at the base of one was found a small pocket of pus. Cultures were made of this pus, but in some manner were lost and not examined. Following the operation all acute symptoms ceased almost immediately and the child is now perfectly well except for the remaining ankylosis and hypertrophy of some of the joints. A pocket of pus, such as was found in this case, I have often seen when tonsils were removed, and when such a condition is present it is a menace to the child's life, no matter what the infection.

I would not have it understood as the intention of the paper to contend that the tonsil is the proven source of infection in all cases of rheumatic infection in children, but rather to forcibly call attention to that structure as the most likely source of infection, and recommend its removal in all these cases when diseased.

Absolute rest should be the first and most important aim of treatment in all

cases of rheumatic affections. In some of the milder forms, and especially in chorea, this is altogether too frequently neglected with most disastrous results. The great tendency for endocarditis to develop in children, no matter how slight the other symptoms, make it imperative to relieve the heart of all strain, which can only be done by absolute rest in bed.

Medicinally the salicylates are indicated and in children are usually well borne and very effective. The natural tendency to a short and mild course makes the rheumatic arthritis of children easy to handle, the greatest difficulty being to keep the children quiet for a period sufficiently long to protect the heart. Occasionally local application to inflamed joints may be required, but usually the salicylates relieve the pain quickly and effectually.

The development of an endocarditis demands careful attention. Here again, however, the principal factor in the treatment is rest with possibly the application of an ice bag over the region of the heart and the administration of a sedative, if required. The diet throughout should be light and careful attention given the bowels.

In conclusion, I would again urge the most frequent and careful examination of the heart in every case of rheumatic infection in childhood, no matter how slight the symptoms of such infection may be; and also that more attention be given the throat in these cases, with the view of finding in the tonsils the very probable source of infection, which, if such be the case, should be removed at once.

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MAY

Editorial

No physician's advice is needed by diligent readers of the daily papers. A casual survey of the four newspapers of Detroit on a given day discloses the fact that almost any disease known to the laity is readily curable, at a minimum expenditure (?). The medium of cure ranges from pills and powders to whiskey and mysterious druggists' recipes, from the personal ministrations of "eminent specialists" to the "motherly" care of an abortionist. Perhaps the comparison of one day's issue is unfair, but the result shows that the *Free Press* is the cleanest sheet medically. The most objectionable advertisement is of an injection, "*Bron*," "Prompt Relief for the Most Obstinate Case, without Inconvenience." Drs. Kennedy and Kergan have a three-line insert under classified advertisements, along with a midwife, and the Rad Medical Co., who profess to cure "contagious blood poison" (the euphemistic term for syphilis), in 30 to 90 days. Whether the scarcity of medical advertising in the *Free Press* represents a definite policy or is accidental, we are unable to state.

On the other hand, the *Journal* and *News* are generous in their space to the nostrum sellers. In the former is a quarter-page display of Swamp Root, containing testimonials from four De-

troit druggists. These may be of interest and are here quoted:

Detroit, Mich., 3-24, 1908.

Dr. Kilmer & Co.,

Binghamton, N. Y.

Gentlemen:—Your Swamp-Root seems to enjoy the approval of the public to that extent that we are forced to the conclusion that you have a remedy of merit.

Respectfully,

GRAY & WORCESTER,

Detroit, Mich., March 24, 1908.

Dr. Kilmer & Co.,

Binghamton, N. Y.

Gentlemen:—For a great many years Dr. Kilmer's Swamp-Root has been one of our best sellers. It is one of those standard remedies that seems to have a larger sale each year.

Preparations like Swamp-Root must have merit as it is known to be an excellent repeater. We do not hesitate to recommend it to anyone suffering with kidney disease.

Very truly yours,

E. C. KINSEL.

Detroit, 3-24, 1908.

Dr. Kilmer & Co.,

Binghamton, N. Y.

We have handled Dr. Kilmer's Swamp-Root for years. We have always found this a steady seller. We believe it will do all you claim for it, etc.

CENTRAL DRUG Co.,

Prince.

Detroit, Mich., March 24, 1908.

Dr. Kilmer & Co.,

Binghamton, N. Y.

Gentlemen:—We have been selling Dr. Kilmer's Swamp-Root for several years and have found it to be one of the best Kidney Remedies on the market. We are selling more of Dr. Kilmer's than any other kind, and it seems to give entire satisfaction to our customers.

Respectfully yours,

GRUNOW & PATTERSON.

It would be interesting to know how these firms reconcile their attitude in this matter with their prescription patronage. It is also striking that the E. C. Kinsel concern does not "hesitate to

recommend it to anyone suffering with kidney disease." That counter prescribing is a frequent failing of druggists is well known, but that it is publicly acknowledged in this way seems a brazen act of shamelessness.

The Peruna advertisement is again to the front, emblazoned in the *Times*. Probably many temperance advocates are grateful to Dr. Hartmann for his bracing prescription, quite ignorant of the fact that they are imbibing a strongly alcoholic beverage. The literature embraces a description of a new preparation of Peruna in tablets, viz:

For two years Dr. Hartman and his assistants have labored incessantly to create Peruna in tablet form, and their strenuous efforts have just been crowned with success. People who object to liquid medicines can now secure Peruna tablets. These tablets represent the medicinal ingredients of Peruna, and each tablet is equivalent to one average dose.

The "incessant labors" of these gentlemen must have been humorous when they were attempting to triturate alcohol! It may safely be asserted that the identical ingredients of liquid Peruna made into tablets would fail to satisfy many of its habitués. But it would be quite possible to institute some other less volatile agent for the spirituous portion, and perhaps the Peruna tablet may become a worse evil than the decoction.

Mrs. Pinkham, through the kindness of the *Journal* and the *News*, still invites all sick women to write to her, and a Detroit lady is quoted to extol the merits of this time honored compound:

Mrs. Louise Jung, of 332 Chestnut St., Detroit, Mich., writes:

"I suffered from a very severe female weakness for a long time. Lydia E. Pinkham's Vegetable Compound restored my health. I hope it will do other women as much good as it has me."

We believe Mrs. Jung's hope will be fulfilled.

Another claimant in the *News'* columns is a little-heard-of remedy, M. I. S. T. No. 2. We read an anatomist's (?) verdict and then the company's recommendation:

"I have given personal inspection to the working of M. I. S. T. on the human system, and must say that it entirely meets with my professional sanction.

D. H. LOOMIS, Late Demonstrator of Anatomy, Philadelphia Medical College.

We Guarantee M. I. S. T. No. 2 Will Cure or We Will Refund Your Money.

RHEUMATISM, no matter how long standing. Any case of Inflammation of the Bladder or Enlarged Prostate Gland, no matter if the patients have been for years forced to use a catheter. BLOOD POISON IN ANY STAGE. ANY CASE OF DIABETES.

Any case of Stricture without local treatment. In addition to the above M. I. S. T. No. 2 has cured many cases of Paralysis, Locomotor Ataxia, Spinal Trouble and apparently incurable diseases of the nerves and has removed from the system cancer and cancerous growths."

The *News* helps along the good cause by accepting the advertisement of Juven's Pills (for "vital weaknesses," etc.), Tarrant's Capsules "for vaginal and urethral diseases," Dr. Eliza Laudau, expert in "irregularities" of women, and others of her ilk, Big G injection, etc. These represent the foulest type of medical advertisement and foster the degradation of morals and the propagation of disease. The *Journal* presents a similar lot, with some others for good measure.

The new form of medical advertisement, which aims to disarm suspicion and escape the caption of "nostrum," is a prescription, usually calling for one or more familiar (and harmless) drugs, plus some unheard-of ingredient, such as "Marmola," "Cardiol," "Kargol." In each instance the essential drug is one that the druggist can buy only of the manufacturer who makes it. The in-

genious ways in which the advertiser appeals to the public is here illustrated:

Fat Wives and Nervous Husbands.

(Article 1.)

Many home storms arise simply because the wife is fat. She, unfortunate soul, with unkempt hair and no corsets, making her laborious way between the kitchen and dining room, with all her fat, quivering, apologetically under her wrapper, makes fair game for hubby's sarcasm. On such occasions enough may be said to bring that home toppling down to the divorce court. This should be a warning to fat wives to reduce. Fortunately this is not much of a task since exercising and starvation have been rendered unnecessary by the Marmola Prescription. All a woman needs to do nowadays is get from her druggist $\frac{1}{2}$ oz. Marmola, $\frac{1}{2}$ oz. Fluid Extract Cascara Aromatic and $3\frac{1}{2}$ oz. Sirup Simplex, and take a teaspoonful after each meal and at bedtime.

Not only does the wily vendor incite the apprehension of the almost sick, but he prods the vanity of the fair sex and arouses their fear of conjugal infelicity.

In the *News* one Mr. Cooper sounds the knell of human ills, by touting the theory that a deranged stomach is at the bottom of them all, and the cure is Cooper's New Discovery. At the end of the advertisement one sees the note that the Michigan Drug Co. supplies the trade. This firm's name is also seen on other announcements, while the Kinsel, Central Drug, Grunow & Patterson and Gray & Worcester concerns are the retailers usually mentioned.

Among the old standbys which seem to withstand the siege of competition, reform and hard times are Hostetter's Bitters, S. S. S., Dr. King's New Discovery (which, by the way, no longer names consumption in its ad), Carter's Little Liver Pills, Beechan's Pills, Ayer's Sarsaparilla (non-alcoholic now, if you please), Castoria, Syrup of Figs, etc.

The *News* carries large display advertisements, with pictures, of Drs. Ken-

neddy and Kergan, and their familiar rigamarole; Dr. J. A. Lonsdale, who again thrums the chord of "strength, vitality, and manhood," and Dr. Guy Clifford Powell, who has discovered "how to use the mysterious and invisible nature forces for the cure of Deafness and Head Noises"!

Dr. G. C. McVoy reaches out for every class of patients, claiming to cure all chronic ailments, "no matter what the cause," and then making a special grab for the "lungers" by means of "Ozoline," the explanation of which is best given in the doctor's own words:

ONLY APPLIANCE OF ITS KIND WEST OF NEW YORK

Supplies Health Giving Air of the Rocky Mountains.

HOW DR. McVOY CURES ASTHMA, BRONCHITIS AND LUNG TROUBLE.

Any person who has ever breathed the pure air of the Colorado mountains knows what it means in giving vitality, strength and exhilaration. Dr. G. C. McVoy, at 96-98 Broadway, has a mechanical device which, so far as known, is only one of its kind west of New York city, and the only device that produces an air purer and lighter than the wonderful atmosphere of Colorado. It produces a sterilized air (called Oxoline) mixed with ozone and filtered through a combination of antiseptic oils, which, when breathed into the throat, nose and lungs, bathes the affected parts with a healing, health-producing vapor that kills the germs and enriches the blood by giving it the vital strength needed.

In the modern crusade against tuberculosis, asthma, bronchitis and catarrh, the leading scientists have agreed with Dr. McVoy that these diseases can be cured in any climate by hygienic care and proper breathing. These diseases are caused by germs, and the only effective remedy is something that will reach directly to the diseased spot in the throat, lungs or bronchial tubes, and destroy and expel these germs.

This is done by Dr. McVoy's Ozoline. Dr.

McVoy's experience as a specialist in these diseases is too well known to be mentioned here. He is a physician of great success. Dr. McVoy invites any one who is interested to call at his office at 96-98 Broadway, where the workings of this marvelous device will be cheerfully demonstrated.

Looking over the rest of the collection, there is the Eczema cure by D. D. D. prescription (which reminds us of the tombstone over one Dr. Dudley's grave, inscribed with seven D's, which, translated, were "Do, dear devil, decently damn Dr. Dudley"!); Dr. Chase's Kidney and Liver Pills, Pyramid Pile Cure, Wheeler's Nerve Vitalizer (where-with is an instructive lecture on nerves), Rengo, the great fat reducer, and so forth, ad nauseam.

Thus the merry round continues; the newspaper assumes smug virtue in its editorial columns and caters to humbuggery and smut in its medical advertisements. It is a graft in the form of a vicious circle, pervading the daily press throughout the country. A few newspapers here and there have taken an admirable stand and have purged their columns, as mentioned from time to time in the *Journal of the American Medical Association*. In Detroit the *Free Press* and *Times* are less objectionable than the *News* and *Journal* and perhaps a judicious movement by physicians, clergymen and educators might improve matters. The wave of reform of late years has been powerful and its force is not yet spent; if properly turned to account it might do much to cleanse the morals and health of the community.



Manistee—June 24th and 25th.—As has been several times announced, the forty-third annual meeting of the State Society will be held on Wednesday and Thursday, the 24th and 25th of June, and we will be the guests of the Manistee County Society. This date was

fixed somewhat later than usual, at the request of the local committee, as they believe the weather will be more agreeable than might be the case during the last week in May. It is also expected that the summer railroad schedules will then be in force, giving several more opportunities in the twenty-four hours for reaching the "Salt City."

Positions on the program have been eagerly sought, the result being that the lists of papers for the medical and surgical sections were completed some weeks ago. At this writing there are still a few places open on the gynecological program.

The guest of honor will be Dr. Joseph C. Bloodgood, Associate Professor of Surgery in the Johns Hopkins University, Baltimore. Dr. Bloodgood will deliver an address on the evening of the first day. The Medical Section will have as guest of honor, Dr. Hugh T. Patrick, Clinical Professor of Nervous Diseases in the Northwestern University, Chicago, who will read a paper.

The business of the society will be done, for the most part, as usual, by the House of Delegates. The first meeting (and in many ways the most important) will be held on Tuesday evening, June 23d. Reports from the various standing committees will be heard and questions affecting the profession debated. County societies wishing to have any particular matters brought up and discussed should instruct their delegates accordingly.

The officers of the county societies should make an especial effort to attend the state meeting. It is probable that a meeting for the organization of the county secretaries will be held. Such an organization might meet next fall, for there are many questions which could be discussed by such a body with great profit.

The entertainment at Manistee will undoubtedly be one of the strong features. All who know the local members know that hospitality will not be lack-

ing. The social side of the annual meeting is perhaps the most valuable, at least it is second only to the instruction which may be had from attending the scientific meetings. There will be several opportunities for purely social intercourse and the local committee assures us that the gatherings will be unusually attractive. The committee also promises us that the fish will bite well on the day before and two days after the meeting.

The complete program and list of entertainment features will be published in the June issue. In the meantime it is to be hoped that each county society will plan to send a large delegation to Manistee.



Short Papers Are Remembered.—They are the papers which make an impression. It is seldom that any one has a message for a medical society which he cannot deliver in ten minutes or, at most, fifteen. Long case histories and long citations from authorities have no place at the ordinary medical meeting. Let the paper, as prepared for publication, be full and complete. Let the portion which is read contain the points which are to be emphasized with only such details as are pertinent. Make these stand out and an impression will be made which can never be achieved by a long and colorless essay. If a point can be illustrated, prepare a chart and give the audience something to look at. Often a few strokes of the crayon will save many hundreds of the pen. If you are preparing a paper for Manistee, remember these things and let it be your ambition to stimulate a discussion, rather than to say the last word.

Book Notices

Bier's Hyperemic Treatment. In Surgery, Medicine and the Specialties. A manual of its practical application. By Willy Meyer, M. D., New York and Victor Schmieden, Berlin. Octavo, pp. 209. Philadelphia, W. B. Saunders & Co., 1908.

This is a timely book written by two men who have achieved distinction in this line of work. Meyer was one of the first in America to take up Bier's methods, and Schmieden, who is Bier's first assistant, has had ample first hand experience.

The text is divided into two parts. The first, in three chapters, deals with the advantages, the methods and the general rules. The second, in ten chapters, takes up the application of the methods in surgery, medicine and the specialties.

The text is concise and clear. The illustrations are excellent and abundant.

Every practitioner should familiarize himself with these methods. Many of the simpler ones can be applied at little cost and can be used anywhere. It will well repay anyone to read this book carefully.

The International Medical Annual. 1908. Cuarto. 640 pages. Cloth. Price \$3.50. New York, E. B. Treat & Company, 1908.

Few books published are of greater value to the practitioner than the year books, for they give a resume of recent work which the conscientious man cannot afford to miss.

The International is one of the best and is especially strong on the work done in England. The subjects are arranged alphabetically, so that it makes it a handy reference book for the desk. It is well illustrated.

Notable contributions to this volume are the sections on opsonins by Emanuel, of Queen's Hospital and on passive hyperemia by Schmieden, assistant to Bier in Berlin.

Recommended.

Surgery: Its Principles and Practice. In five volumes. By 66 eminent surgeons. Edited by W. W. Keen, M. D., LL. D., Hon. F. R. C. S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Phila. Volume III. Octavo of 1132 pages, with 562 text-illustrations and 10 colored plates. Philadelphia and London: W. B. Saunders Company, 1908. Per volume: Cloth, \$7.00 net; Half Morocco, \$8.00 net.

The third volume of this excellent system has just appeared and the work sufficiently advanced to render a judgment on its value. Briefly, it may be justly said that thus far it fulfills expectations and that the completed work will give the surgical knowledge of today in as complete a form as is probably possible. The volumes have thus far been splendidly illustrated and the book making is all that can be desired.

The first chapters of the third volume are on the surgery of the head by Cushing. They consist of 276 pages and set forth in a particularly clear manner the latest advances in brain surgery, not a few of which have been worked out by the author. Most important progress has been made in this department and nowhere is it better described than here. He says, "the advance of neurological surgery is greatly impeded by the prevailing impression in regard to its dangers and futility—an impression due in a large measure to the unsuccessful attempts of the untrained and inexpert."

Excellent chapters are those on the surgery of the neck by Andrews and on the thyroid gland by the younger Kocher. The surgery of the nose and throat is discussed by Harmon Smith and Brewer, the latter giving excellent sections on tracheoscopy, etc. Brewer also writes the chapters on the thorax. Finney contributes an excellent chapter on diseases of the breast, and Da-Costa one on diseases of the tongue.

The discussion of abdominal surgery begins with the latter third of the volume. Munro writes the opening chapter on general considerations, the second on surgery of the abdominal wall and the third on the peritoneum and retroperitoneal space. They are all well written.

An important chapter is that on the esophagus by Gottstein of Breslau. Mayo Robson contributes 120 pages on the surgery of the stomach and the Mayos 75 on the liver and gall bladder. Needless to say that the chapters are complete and authoritative. The same may be said of the last two chapters of the volume on the pancreas and spleen by Moynihan.

Metabolism and Practical Medicine. By Carl von Noorden, Professor of the First Medical Clinic, University of Vienna. Vol. III. The Pathology of Metabolism by Carl von Noorden, H. Solomon, A. Schmidt, A. Czerny, H. Steinitz, C. Dopfer, M. Matthes, C. Neuberg, O. Loewe, and L. Mohr. Anglo-American issue under the editorship of J. Walker Hall, Professor of Pathology, University College, Bristol, England. 1320 pages. W. T. Keener & Co., Chicago, 1908. Price, \$7.

The third and concluding volume of this great work takes up diabetes, gout, and obesity by von Noorden, who also contributes to the chapter on diseases of the skin and on mineral waters. Neuberg discusses rarer derangements (pentosuria, lactosuria, etc.), oxaturia, phosphaturia. Children's diseases are discussed by Czerny and Steinitz, while Schmidt writes on cancer. A very important chapter on metabolism of the ductless glands is written by Levy; drugs and poisons by Loewe; while Solomon writes on the influences of light on metabolism. Nervous and mental diseases are discussed by Mohr.

This list indicates somewhat the scope of the volume. It remains to say that the work is a very important one, summarizing as it does, and making known to the English speaking profession, the enormous volume of work which has been done in this direction on the continent. The size of the present volume gives some idea of the enormous amount of literature which has been accumulated on the subject. It touches every branch of medical practice and it seems probable that much of our immediate progress, in internal medicine especially, will lie along these lines.

Without attempting to be exhaustive, these books cover a great number of topics, and afford somewhat more than an excellent outline of this immense and difficult subject.

The Treatment of Fractures: With Notes Upon a Few Common Dislocations. By Chas. L. Scudder, M. D., Surgeon to the Massachusetts General Hospital. Sixth Edition, Revised and Enlarged. Octavo volume of 635 pages, with 854 original illustrations. Philadelphia: W. B. Saunders Company, 1907. Polished Buckram. \$5.50 net.

The worth of Dr. Scudder's book on fractures needs no emphasis more potent than the fact of its present sixth edition in eight years. Its first edition attained immediate popularity, which successive issues have only increased; the author and his publishers have allowed no factor escape them, which would tend to enhance the usefulness of their standard work. It certainly has no superior as a compilation of terse advice concerning the pathology, diagnosis, and treatment of fractures; it follows the same regional arrangement as before, which is convenient, and the directions for applying splints and bandages are amplified still further by new illustrations. The art of dressings and bandages is nowhere better mastered than in Boston and there is little need

for diagrams when photographs portray such diagrammatic accuracy.

Scudder's work on fractures is notably up to date and continues to serve as the most generally useful guide to the subject.

A Text-book of Minor Surgery. Edward Milton Foote, A. M., M. D., Instructor in Surgery, College of Physicians and Surgeons, Visiting Surgeon, New York City Hospital, etc. Illustrated by 407 engravings from original drawings and photographs. Cloth, \$5.00. D. Appleton & Co., New York and London. 1908.

The author in his preface states a little appreciated truth when he says that the treatment of minor surgical ailments is seldom sufficiently described in ordinary text-books on surgery; also when he says that "this neglected field of minor surgery is the only one into which the average practitioner will ever enter, and is the one in which most surgeons will find the majority of their patients."

He aims to cover this particular field and in a volume of 750 pages does so in an exceptionally competent way. The arrangement is in eight sections, as follows: Affections of the Head; of the Neck; of the Trunk; of the Genito-urinary Organs; of the Anus and Rectum; of the Arm and Hand; of the Leg and Foot; Minor Surgical Technique.

The conspicuous feature of the book, that must appeal to every one who has need of it, is the explicitness of the text; no words are wasted, no unnecessary theorizing is introduced; there are many valuable hints in diagnosis, seldom found in surgical treatises, and a wealth of detail concerning treatment.

It is true, the volume contains matter relative to certain conditions that border upon or actually belong to major surgery. But this is not a fault, so long as such topics do not lessen the space given to strictly minor surgical ailments. The author's wide experience in his subject is reflected throughout, and lends especial value.

Progressive Medicine. A Quarterly Digest of Medical Science. Edited by H. A. Hare, M. D., and H. R. M. Landis, M. D. First Quarter, 1908. 282 pages. Philadelphia, Lea and Febiger, 1908.

This number begins the tenth year of Progressive Medicine. It is the best of the medical re-

views and should be widely read, for the four numbers of any year reflect medical advance in a most satisfactory manner. Not only are the important articles in the literature of each subject excellently epitomized, but there is also comment on these articles by the reviewers, all men of authority.

This volume contains five sections, as follows: Surgery of the Head, Neck and Thorax by Frazier; Infectious Diseases, including Acute Articular Rheumatism and Croupous Pneumonia, by Preble; Diseases of Children by Crandall; Rhinology and Laryngology by Kyle; Otology by Duel.

The Principles and Practice of Modern Otology. By John F. Barnhill, M. D., Professor of Otology, Laryngology, and Rhinology, Indiana University School of Medicine, and Ernest de W. Wales, B. S., M. D., Associate Professor of Otology, Laryngology and Rhinology, Indiana University School of Medicine. Octavo of 575 pages, with 305 original illustrations, many in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.50 net; Half Morocco, \$7.00 net.

The following objects have been kept in view by the authors:

1. To modernize the subject.
2. To correct certain traditional beliefs.
3. To advocate the earliest possible prophylaxis or treatment.
4. To emphasize the importance of a thorough examination and a definite diagnosis as a basis for rational treatment.
5. To thoroughly illustrate the text.

In so far as the first four points are concerned it should be understood by itself that any book on any subject which does not fulfill these requirements is a priori obsolete, but unfortunately the authors are entitled to emphasize the object of their efforts because the whole subject-matter is treated by the medical profession at large with peculiar inappreciation, lack of enthusiasm and unjustified pessimism. Three hundred and five illustrations, and some of them in colors, add materially to the value of the volume. The illustrations are unusually clear and instructive, the various subjects are treated in an attractive manner and it is highly commendable that the book not only states what should be done but also what should not be done. All in all, the book represents a most commendable addition to our medical library. The general practitioner, as well as the specialist, cannot very well afford to be without it.

**Regular Meeting State Board of Health,
Friday, April 10, 1908, Lansing,
Michigan.**

The regular quarterly meeting of the Michigan State Board of Health was called to order at two o'clock, April 10, 1908, in the office of the Secretary at Lansing, Michigan, the members present being: President Angus McLean, M. D., of Detroit; Vice-President Malcolm Sinclair, of Grand Rapids; Mr. Charles M. Ranger, of Battle Creek; Aaron R. Wheeler, M. D., of St. Louis, and Secretary Shumway, of Lansing.

Because of the large number of foreigners, over 500,000 within our borders, about eight per cent of whom can neither read nor write English, and because of the frequent outbreaks of contagious diseases among this ignorant and helpless class, the Board by resolution has authorized the Secretary to have printed and issued in several foreign languages instructions bearing on the contagious character of the preventable diseases and the methods of preventing their spread. Letters from various physicians in those parts of the State where the foreign element is conspicuous have suggested the great need of this step; and the department will furnish free such number of these pamphlets in foreign languages as may be deemed useful in any locality.

By resolution, the Board also authorized the Secretary to issue placards for posting in public places, wherever factories, depots and other public institutions may find it useful to disseminate information regarding the danger of the spitting habit, and the spread and prevention of tuberculosis. Such notices are designed to catch the public eye, and with a few brief statements to arouse public curiosity and interest, and to impress the public with the facts of tuberculosis, its high mortality rate and preventability.

Rules and regulations for the control

of the bacteriological laboratory were adopted by the Board, designating who are eligible to send in material, in what manner it shall be sent, and what the conduct of the laboratory shall be.

The date for the next embalmer's examination has been fixed for three days, May 20, 21 and 22, to be held in Detroit.

Mr. Ranger was appointed a committee to confer with various undertakers relative to the change and improvement of the transit permit blanks.

Three licensed embalmers, two holding licenses from Ohio and one from Indiana, were granted reciprocal licenses to practice the art of embalming in the State of Michigan.

The War on Tuberculosis

In this department, which will appear from time to time, brief and suggestive notes will be made touching on the economic side of the combat against tuberculosis. The notes are, for the most part, clipped from our exchanges.

The committee on the prevention of tuberculosis of the Charity Organization Society of New York announce that the first season of the old Staten Island ferryboat Southfield as a hospital for the treatment of tuberculosis patients was a success. The hospital was in operation from June 13 to October 31, and during that time 242 patients were treated.

The Ladies' Auxiliary of the West Virginia Anti-Tuberculosis League is the latest move along that line. The object of the organization is the furtherance of the good work inaugurated by the League, and is one of the most important movements ever inaugurated in the State.

The State Health Department of New York recently held a tuberculosis exhibit in Utica to assist the State Charities' Aid Association in educating the public in that vicinity.

A department for the instruction of pupils on how to avoid tuberculosis has been introduced into the public schools of Pittsburg. The expense will be met by a number of wealthy men of the city, who will also conduct a sanatorium.

The open air fight on tuberculosis at Minneapolis has reduced the death-rate in five years from 116 to 96 to 1,000.

Dr. L. Farrand, New York, advocates in the campaign against tuberculosis, the use of leaflets, handbooks, etc., adapted to special classes in the community and in the various languages; also the use of exhibitions, stereoscopic and otherwise, by which public attention can be directed to the dangers of this disease. The cost of these would be comparatively small and their continuous use would be effective. He would also employ the method of public lectures and meetings, insertion of popular articles in the newspapers, posters, the use of advertising space on tickets, street car transfers, etc., which has been given in New York City to a certain extent by advertising agents, who have become interested in the campaign. The co-operation of the churches should be asked and all other means of properly advertising the subject that can be devised.

The first of the great sanatoria planned by the State of Pennsylvania in its battle against tuberculosis has taken definite form at Mount Alto. A well-equipped infirmary and model cottages, are being rapidly erected, in which a model sewerage plant will be installed. Already \$2,000,000 have been appropriated and more will follow.

The Morgan County Medical Society at a recent meeting in New Decatur, Ala., organized an auxiliary society in the study of tuberculosis. This society will act in conjunction with the State Medical Association in the fight against tuberculosis.

Dr. T. J. Roddick, of Montreal, ex-president of the British Medical Association, has been accredited with the statement that within twenty-five years, providing adequate measures for its elimination are adopted, a case of consumption will be a curiosity. When one considers that to-day the mortality from tubercular disease puts consumption at the head of the death list, Dr. Roddick's prophecy seems unduly sanguine. So much is being accomplished, however, in the warfare waged against this scourge, that it is not only possible, but probable.

It is encouraging to note that Gov. Swanson, of Virginia, will urge upon the approaching General Assembly the importance of action looking to the inauguration by the State of a vigorous campaign against tuberculosis. That such a campaign cannot be entered upon too soon or prosecuted too vigorously does not admit of argument.

New York has adopted a novel plan for the relief of its vast army of tubercular patients. Old ferry-boats which have passed the stage of usefulness as common carriers will be converted into floating hospitals. A trained nurse, with a visiting physician, has charge of each boat when outfitted by the Charity Organization, and patients are recruited from the Associated Tuberculosis Dispensaries.

"The Cause and Prevention of Consumption" is the title of a splendid pamphlet written for the laity and published by the Illinois State Board of Health. Write for one to the Secretary of the Board at Springfield, and enclose stamp.

The exhibit of the American Association for the Prevention of Tuberculosis is now at Lexington, Ky.

The Central Committee of the International Congress on Tuberculosis has announced the offer of the following prizes:

I. A prize of \$1,000 is offered for the best evidence of effective work in the prevention or relief of tuberculosis by any voluntary association since the last International Congress in 1905. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

Evidence is to include all forms of printed matter, educational leaflets, etc.; report showing increase of membership, organization, classes reached—such as labor unions, schools, churches, etc.; lectures given; influence in stimulating local Boards of Health, schools, dispensaries, hospitals for the care of tuberculosis; newspaper clippings of meetings held; methods of raising money; method of keeping accounts.

Each competitor must present a brief or report in printed form. No formal announcement of intention to compete is required.

II. A prize of \$1,000 is offered for the best exhibit of an existing sanatorium for the treatment of curable cases of tuberculosis among the working classes. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

III. A prize of \$1,000 is offered for the best exhibit of a furnished house, for a family or group of families of the working class, designed

in the interest of the crusade against tuberculosis. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award. This prize is designed to stimulate efforts towards securing a maximum of sun-light ventilation, proper heating, and general sanitary arrangement for an inexpensive home. A model of house and furnishing is required. Each competitor must present a brief with drawings, specifications, estimates, etc., with an explanation of points of special excellence. Entry may be made under competitor's own name.

IV. A prize of \$1,000 is offered for the best exhibit of a dispensary or kindred institution for the treatment of the tuberculous poor. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

V. A prize of \$1,000 is offered for the best exhibit of a hospital for the treatment of advanced pulmonary tuberculosis. In addition to the prize of \$1,000, two gold medals and three silver medals will be awarded. The prize and medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management and results obtained. Each competitor must present a brief or report in printed form.

VI. The Hodgkins Fund Prize of \$1,500 is offered by the Smithsonian Institution for the best treatise that may be submitted on "The Relation of Atmospheric Air to Tuberculosis."

The detailed definition of this prize may be obtained from the Secretary-General of the International Congress or Secretary of the Smithsonian Institution, Chas. D. Walcott.

VII. Prizes for Educational Leaflets:

A prize of \$100 is offered for the best educational leaflet submitted in each of the seven classes defined below. In addition to the prize of \$100, a gold medal and two silver medals will be awarded in each class. Each prize and medal will be accompanied by a diploma or certificate of award.

Competitors must be entered under assumed names.

A. For adults generally (not to exceed 1,000 words).

B. For teachers (not to exceed 2,000 words).

C. For mothers (not to exceed 1,000 words).

D. For in-door workers (not to exceed 1,000 words).

E. For dairy farmers (not to exceed 1,000 words).

F. For school children in grammar school grades (not to exceed 500 words).

In classes A, B, C, D, E, and F, brevity of statement without sacrifice of clearness will be of weight in awarding. All leaflets entered must be printed in the form they are designed to take.

G. Pictorial booklet for school children in primary grades and for the nursery.

Class G is designed to produce an artistic picture-book for children, extolling the value of fresh air, sun-light, cleanliness, etc., and showing contrasting conditions. "Slovenly Peter" has been suggested as a possible type. Entry may be made in the form of original designs without printing.

VIII. A gold medal and two silver medals are offered for the best exhibits sent in by any States of the United States, illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

IX. A gold medal and two silver medals are offered for the best exhibits sent in by any State or Country (the United States excluded), illustrating effective organization for the restriction of tuberculosis. Each medal will be accompanied by a diploma or certificate of award.

X. A gold medal and two silver medals are offered for each of the following exhibits; each medal will be accompanied by a diploma or certificate of award; wherever possible each competitor is required to file a brief or printed report:

A. For the best contribution to the pathological exhibit.

B. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State of the United States. Brief required.

C. For the best exhibit of laws and ordinances in force June 1st, 1908, for the prevention of tuberculosis by any State or Country (the United States excluded). Brief required.

E. For the society engaged in the crusade

against tuberculosis having the largest membership in relation to population. Brief required.

F. For the plans which have been proven best for raising money for the crusade against tuberculosis. Brief required.

G. For the best exhibit of a passenger railway car in the interests of the crusade against tuberculosis. Brief required.

H. For the best plans for employment for arrested cases of tuberculosis. Brief required.

XI. Prizes of two gold medals and three silver medals will be awarded for the best exhibit of a work-shop or factory in the interest of the crusade against tuberculosis. These medals will be accompanied by diplomas or certificates of award.

The exhibit must show in detail construction, equipment, management, and results obtained. Each competitor must present a brief or report in printed form.

The following constitute the Committee on Prizes:

- Dr. Charles J. Hatfield, Philadelphia, Chairman.
- Dh. Thomas G. Ashton, Philadelphia, Secretary.
- Dr. Edward R. Baldwin, Saranac Lake.
- Dr. Sherman G. Bonney, Denver.
- Dr. John L. Dawson, Charleston, S. C.
- Dr. H. B. Favill, Chicago.
- Dr. John B. Hawes, 2nd, Boston.
- Dr. H. D. Holton, Brattleboro.
- Dr. E. C. Levy, Richmond, Virginia.
- Dr. Charles L. Minor, Asheville, N. C.
- Dr. Estes Nichols, Augusta, Me.
- Dr. M. J. Rosenau, Washington.
- Dr. J. Madison Taylor, Philadelphia.
- Dr. William S. Thayer, Baltimore.
- Dr. Louis M. Warfield, St. Louis.

County Society News

Dickinson-Iron.

At the meeting at Crystal Falls, on April 10, 1908, the following officers were elected:
President, Dr. J. B. Brasseur, Norway.
Vice-President, Dr. A. M. Darling, Crystal Falls.
Secretary-Treasurer, Dr. H. Newkirke, Iron Mountain.

H. NEWKIRKE, Sec'y.

Ionia.

NEW FEE BILL FOR IONIA COUNTY.

As adopted by the County Medical Society, November 14, 1907.

Each city or village to establish its own fees for calls and prescriptions in their respective places.

- 1. The call for Ionia City\$ 1.50
Night visit 2.00
- 2. The call for Belding City..... 1.00
Night visit 1.50
- 3. Country calls, the visit 1.00
Mileage, 50c a mile one way. Distance to be measured from the physician's office.
- 4. Office prescriptions with medicine 75c up.
- 5. Physical examinations\$1.00 to 5.00
- 6. Consultations\$5.00 to 10.00
- 7. Administering Anesthetic—
 - 8. Dental Cases 5.00
 - 9. Minor Surgery 5.00
 - 10. Major Surgery.....\$10.00 to 25.00
 - 11. Obstetric Cases, fee for assistant 5.00
- 12. Obstetric visits not exceeding 5 hours. 10.00
- 13. Each hour of detention over 5 hours to be, per hour 1.00
- 14. All subsequent visits to be charged at regular call rates.
- 15. For giving Chloroform or Anesthetic in labor or miscarriage..... 5.00
- 16. Applying forceps or instrumental delivery or delivery other than normal. 5.00
- 17. For immediate relief of lacerated perineum 5.00

CONTAGIOUS DISEASES.

- 18. Visit in Diphtheria 2.00
- 19. Visit in Scarlet Fever 2.00
- 20. Visit in Small Pox 5.00
- 21. Visit each additional case in same family, half of visit.
- 22. Consultation in contagious diseases.... 10.00

SURGERY.

- 23. Applying cast to arm or leg...\$5.00 to 10.00
- 24. Applying cast to body, \$10.00 up.
- 25. Fracture of Femur(1st setting)..... 50.00
- 26. Fracture of Tibia and Fibula..... 50.00
- 27. Fracture of Humerus 25.00

28. Fracture of Forearm (simple fracture)	25.00
29. Compound, complicated or comminuted fracture, \$15.00 to \$25.00 extra.	
30. Fracture of Clavicle	25.00
31. Amputation of breast	50.00
32. Capital amputation	\$50.00 to 100.00
33. Amputation of Phalanges, each.....	10.00
34. Amputation of Uvula.....	\$3.00 to 5.00
35. Assisting in important surgical operations	\$10.00 to 25.00
36. Excision of tonsil	10.00
37. Operations for Necrosis or Exostosis..	\$25.00 to 50.00
38. Operations for hare-lip.....	25.00
39. Operations for strangulated Hernia...	50.00
40. Operations for lacerated Cervix.....	\$25.00 to 50.00
41. Operations for Perineum incomplete..	\$25.00 to 50.00
42. Operations for Fistula-in-ano.....	25.00
43. Operations for Strabismus	25.00
44. Operations for Pterygium.....	25.00
45. Operations for Paracentesis of eye...	25.00
46. Operations for ligation of Hemorrhoids.....	\$15.00 to 25.00
47. Operations for Lithotomy.....	100.00
48. Operations for Circumcision.....	10.00
49. Operations for Trephining skull.....	50.00
50. Operations for Mastoid.....	50.00
51. Operations for Radical Cure of Hernia	50.00
52. Operations for Post Mortem.....	10.00
53. Operations for Post Mortem for Coroner	25.00
54. Operations for resection of joint.....	\$25.00 to 50.00
55. Operations for removing Adenoids...	25.00
56. Operations for Tracheotomy and intubation.....	\$25.00 to 50.00
57. Operations for tapping Hydrocele....	10.00
58. Operations for removing foreign bodies from eye, ear, nose or throat.	\$1.00 to 5.00
59. Reducing dislocation of the hip.....	50.00
60. Reducing dislocation of the shoulder up from.....	15.00
61. Reducing dislocation of the elbow, ankle or knee.....	\$15.00 to 25.00
62. Reducing Hernia by Taxis.,.,	\$5.00 to 20.00

63. Way calls, 1st call \$1.50. All subsequent calls, regular rates.	
64. Prescribing for other members of family when making regular calls. Each up from.....	.50
65. Testifying in Criminal Cases..	\$15.00 to 50.00
65. Prescriptions in Gonorrhœal cases.	
First prescription.....	2.00
Subsequent prescriptions, each.....	1.00
66. Examination for Life Insurance, old line	5.00

C. S. COPE, Secy.

Kalamazoo Academy.

During the present year, a number of distinguished physicians from different parts of the State, have kindly presented papers before the Academy. Among those from outside of the city were Dr. C. B. Burr, Dr. Louis J. Hirschman, Dr. Andrew P. Biddle and Dr. F. R. Zeit of Chicago. It is a plan of the Academy to have at each monthly meeting a paper by a non-resident physician and two papers by local members.

The Academy has also held special, weekly, evening meetings. On Thursday, March 12th, Some Important Diseases of the Glands of Internal Secretion were taken up and a number of interesting cases were reported. Dr. Blanche Eppler had charge of the evening.

The regular monthly meeting of the Academy was held March 10th. Dr. Victor C. Vaughan of Ann Arbor read a paper on Poisonous Proteids. He divides immunity into three classes. First, Anti-toxic Immunity. Second, Phagocytic Immunity. Third, Bacteriolytic.

Of the latter he spoke in particular. He has found that all proteids may be divided into a poisonous and a non-poisonous part, the former giving the characteristic proteid poison symptoms; namely: First stage, that of Peripheral Irritation. Second, that of stupor and partial paralysis. Third, that of convulsions and asphyxia. The latter non-poisonous part he believes to be a specific, that it produces immunity to a certain extent against the poisonous portion of the proteid in question and that when it is introduced into the body, it causes certain cells, which he thinks may be the mesoblastic cells of the blood vessels to produce a ferment so that when a similar proteid is introduced into the body, it is immediately broken up by this ferment.

The proteid portion of the typhoid germ may

be also broken up into poisonous and non-poisonous portions. The latter when introduced into the body produces a ferment that will destroy the typhoid germs thus preventing their multiplication, if they should be introduced into the body.

He believes that the untoward effects sometimes produced in giving diphtheria antitoxin due to giving the second dose twelve days or more after the first dose. The first dose causes a ferment to be formed which acts against the blood serum of the horse, it requiring twelve days for the formation of this ferment. If more blood serum is introduced after this, it is immediately broken up into poisonous and non-poisonous substances, the poisonous portion producing the bad effects.

He thinks that smallpox vaccine causes a ferment to be formed which destroys the smallpox poison.

G. F. INCH, Secy.

Kent.

The Kent County Medical Society has appointed a Pure Milk Commission, which is endeavoring to obtain better milk inspection and certified milk.

The Society is endeavoring, through its Committee, to induce the Board of Police and Fire Commissioners to appoint an Ambulance Surgeon who shall accompany the Ambulance on all its runs and render first aid to injured parties while being conveyed to the hospital.

At the last meeting of the Society a fund of twenty-five dollars was raised for the purpose of securing evidence for the prosecution of illegal practitioners and quacks.

The Society recently appointed a Committee to confer with the Board of Education and endeavor to have them appoint a Staff of Physicians who shall, during the next school year, deliver a course of lectures to the High School students upon Social Evils and Disease, Hygiene, Infectious Diseases and such other subjects as they may deem important. F. C. WARNSHUIS, Secy.

Marquette.

MARQUETTE, MICH., February 27, 1906.

Whereas, The attempts have been made to establish contract lodge practice in Marquette and Alger counties. It is the opinion of this Society that such practice is detrimental and degrading to the members of our profession; therefore, be it

Resolved, By the Marquette-Alger County Medical Society at this meeting that no members of this Society be permitted to enter into contract relations with such societies or lodges; and, be it further

Resolved, That no physician holding contract be eligible to membership in the Marquette-Alger County Medical Society; be it further

Resolved, That no member of the Marquette-Alger County Medical Society be permitted to consult with any physician doing such contract practice.

H. J. HORNBOKEN, Sec'y.

Montcalm.

The Montcalm County Society held a very excellent meeting at Lakeview, Thursday, April 9th. A good program was rendered, including a paper by Dr. E. A. Stimpson of Eaton Rapids, on "The Psychic Treatment of Nervous Diseases." Our July meeting will be a purely social one, at Baldwin Lake, Greenville. The ladies will come and a basket picnic will be held.

H. L. BOWER, Sec'y.

Oakland.

The Oakland County Medical Society held the adjourned regular March meeting in the Supervisors' rooms in the Court House at Pontiac, March 31st, at 2 p. m. A good attendance was present and an excellent program was rendered.

Dr. C. P. Felshaw of Holly read a paper on "Pneumonia."

Dr. T. E. McDonald of Holly read a paper on "The Advantages of a Fee Bill."

Dr. J. J. Murphy reported three cases of Placenta Previa.

Dr. R. Y. Ferguson reported a case of Cicatricial Adherent Prepuce in an adult.

The discussion of each number was general and generous.

A committee of three, consisting of the President, Dr. T. W. MacKinnon; the vice-President, Dr. T. E. McDonald, and the Secretary, Dr. C. D. Morris, was appointed to report at the next regular meeting the advisability of a fee bill for the county.

Dr. J. C. Black of Milford was appointed as the delegate to attend the Michigan State Medical Society meeting in Manistee next June, and Dr. N. I. Baker of Milford as the alternate delegate.

C. D. MORRIS, Secy.

St. Joseph.

The following letter was recently sent to all physicians in St. Joseph County:

St. Joseph County Medical Society will meet at Centreville, Tuesday, April 28, 1908. A special effort is being made to have every practicing physician in the county present. *This means you, Doctor.*

A good program is assured, papers with assigned discussions followed by a general discussion. The program will be by home talent.

Doctor, there is strength in organization. By meeting each other and exchanging ideas, we can do better work. We shall expect you at the meeting at Centreville, Tuesday, April 28, 1908, and also request that you bring us a good live idea. Look for the program. It will be out soon.

Respectfully submitted,

L. L. CAHILL, Secy.

By order of Pres. L. K. SLOTE, M. D.

Wayne.

At the March meeting of the Surgical Section Dr. H. L. Begle presented a paper on "Facial Expression."

Abstract:—

In the diagnosis and prognosis of disease and in the management of his patient, the physician will be greatly assisted by a careful observation of facial contour and facial expression. Few diseases fail to leave signs of their presence in the face. In some conditions the signs are pathognomic, in many conditions they are, to say the least, suggestive.

To accurately observe facial contour and analyze facial expression, a broad knowledge is necessary of the face, as furnished by the sciences of anatomy, comparative anatomy, embryology, anthropology, physiology, pathology and psychology. A study of the principle of structural variation with reference to the bony and soft parts of the face, along racial, familial, sexual and individual lines; an appreciation of the influence of the special sense-organs and of the functions of vision, respiration and mastication in molding and developing the face; and a knowledge of the psychology of facial expression, are of aid in affording a basis for proper observation and analysis.

It is scarcely appreciated to what an extent the functions of the eyes, nose and mouth influence the development of the face. Symmetry, propor-

tion and full development depend largely upon normal vision, respiration and mastication. To errors of refraction and muscular "imbalance," nasal obstruction, and malocclusion of the teeth may be frequently attributed asymmetry, lack of proportion, arrest of development and deformity.

Nystagmus as a Symptom was the subject of a paper by Dr. J. E. Gleason.

Abstract.

There have always been recognized two forms of nystagmus,—undulatory and rhythmic. In the former the movements of the eye to each side of a fixed point are equal as regards extent and time. In the latter the extent of movement is the same, but the time is different. It is "steady by jerks." Clinically nystagmus has the following classifications: (1) Voluntary, (2) physiological, (3) optical, (4) with paresis of the eye muscles, (5) with disease of the central nervous system, such as hereditary ataxia, and insular sclerosis, tumors of the cerebellum, fourth ventricle, pons, acustica and hypophysis, (6) in photophobia, (7) with conjunctivitis, (8) in reflex ischaemia of the head, (9) in diseases of the vestibular part of the ear. Barany has discovered that the irritability of the vestibular apparatus may be tested by syringing the ear with hot and cold water. Cold water produces nystagmus toward the opposite side, hot water toward the same side. Clinically, in the manifestation of an involvement of the internal ear nystagmus may be seen as follows:

1. Initial Stage.—Irritability plus. Nystagmus undecided.
2. Stage of Inflammatory Irritation.—Irritability plus. Nystagmus to the diseased side.
3. State of Inflammatory Paresis.—Irritability plus. Nystagmus to sound side.
4. Return of Function.—Irritability plus. Nystagmus to both sides. Later to diseased side.
5. Healing.—Irritability plus. No nystagmus.

The importance of knowledge regarding the condition of the labyrinth in preventing intracranial complications of suppurative diseases of the middle ear is obvious. The differential diagnosis between cerebellar abscess and ear suppuration is often rendered possible by differences in the nystagmus produced.

The discussion of both papers was opened by Dr. Anna Odell and Dr. Ray Connor. Drs. Walter Parker, Hickey, Amberg, H. H. Sanderson,

Livingstone, Leartus Connor, and Longyear also took part in the discussion.

Dr. Parker reported a case of sarcoma of the conjunctiva. Dr. Longyear reported a case of dermoid cyst of the ovary removed during pregnancy and exhibited the specimen.

CLARENCE E. SIMPSON, Sec.

Correspondence.

TO THE SECRETARY:

In accordance with the suggestion in your circular letter I take pleasure in reporting to you for publication in the JOURNAL, if you so desire, the success we have achieved so far in this community in the movement against contract practice.

Last year in the reports published in the JOURNAL the City of Pontiac occupied a position that was certainly very humiliating to the profession here, and having this in mind and believing that we had about reached a point that was the limit of tolerance, a movement was instituted in the Pontiac Medical Society having its objective the complete and permanent suppression in this city of the most disastrous of all professional abuses.

A committee for this purpose was appointed and an agreement drawn up covering as they believed every phase of the situation. I will enclose you a copy of the same for publication.

Every member of the Pontiac Medical Society, and this includes every regular practitioner in the city, in general or special practice, signed it willingly.

Surely this should be gratifying to us and encouraging to places that are similarly burdened with such business. Not a single regular physician in the city who was not willing, in some instances even to make a personal sacrifice for the benefit of the profession at large.

The bond of honorable and upright dealing one with another will, we believe, be carried out in this agreement at the date it becomes operative.

That you may realize the magnitude to which contract practice has grown in this community, and understand what its suppression means to us, I will append a fairly accurate list of the lodges and societies that have been preying upon a supposed dignified profession:

Eagles, about 200, \$2.00 per year includes medi-

cal care, without medicine supplied, of member and entire family.

Foresters Independent, about 100, \$1.50 per member and patient finds medicine.

Foresters Court A, about 193, \$1.00 per member and medicine furnished by physician.

Foresters Court B, about 700, \$1.50 per member and physician finds medicine.

Foresters Lady, about 424, \$1.50 per member, physician finds medicine.

Owls, about 50, \$1.50 per member; includes medicine.

Making a total of about 1,667 people in this city of 10,000 people, excluding state institution, who are taken care of, when sick, for the modest sum of one dollar and a half or less and medicine thrown in.

Add to this total the family included in this one lodge and we find that not less than twenty per cent of our population have medical services provided for them for a sum of about \$2,500. There are five physicians engaged in the contract practice out of a total in the city of sixteen regular, two specialists, four homeopaths, and three osteopaths.

Yours truly,

R. Y. FERGUSON,
Secy Pontiac Medical Society.

PONTIAC, MICH., Feb. 28, 1908.

We, the members of the Pontiac Medical Society, each and all of us do hereby covenant and agree to abstain from the so-called Lodge or Contract Practice after the 31st day of December, 1908, thenceforth continually.

By the term Lodge or Contract Practice is understood the rendering of professional services to Lodges, Societies, Orders or Corporations on the plan of a definite fee for an indefinite amount of service, or for such fees as are less than the conventional fees established by usage and adopted by the Pontiac Medical Society October 15th, 1907.

We also agree, when the proper time arrives, to vote for such an amendment to the Constitution of the Pontiac Medical Society as will preclude new members of the Society from engaging in such practice.

It is also understood that there is nothing in this agreement that will prohibit any member of the Pontiac Medical Society from acting as physician to any Lodge, Society, Order or Corporation, providing he secures for his compensation such amounts as are mentioned in the Fee Bill adopted

by the Pontiac Medical Society on October 15th, 1907.

This agreement only goes into effect if signed by all the members of the Pontiac Medical Society engaged in the regular practice of medicine in Pontiac, at the date of the execution of this agreement.

WILLIAM MCCARROLL,	GEO. W. CHISHOLM,
MASON W. GRAY,	E. ORTON,
NATHAN B. COLVIN,.	JOHN D. RIKER,
GEO. H. DRAKE,	D. G. CASTELL,
R. LE. BARON,	F. S. BACHELDER,
STUART E. GALBRAITH,	J. MORSE,
JAMES J. MURPHY,	E. A. CHRISTIAN,
CARLTON D. MORRIS,	EDWARD C. GREEN,
R. Y. FERGUSON,	V. H. WELLS,
H. S. CHAPMAN,	H. C. GUILLOT.

CHICAGO, ILLS., April 22, 1908.

To the Alumni of the Kentucky School of Medicine:

During the meeting of the American Medical Association there will be a reunion and banquet of the alumni of our college at the Auditorium Hotel, June 2, 1908, at 6:30 p. m.

The members of the faculty will be present, and hope to meet the alumni from the entire country.

An attractive musical program is being arranged and there will be addresses from the alumni and members of the faculty.

Address all communications to the Secretary of the Alumni Committee, appointed by the American Medical Association for the Kentucky School of Medicine.

J. R. PENNINGTON,
103 State St.

CHICAGO, April 22, 1908.

To the Alumni of the Northwestern University Medical School:

The approaching meeting of the American Association will be held in Chicago, June 2-5, 1908. The Northwestern University Medical School is fortunate this year in having a combination of the Alumni Week with a meeting of the American Medical Association. One of the special features of this session of the American Medical Association is to be a series of alumni reunions of the different medical colleges in this country. Owing to the central location of Chicago and its unusual opportunities, we anticipate a larger attendance

than usual. A cordial invitation is extended to every graduate of the Northwestern University Medical School to be present at the annual alumni dinner which will be held on Tuesday evening, June 2, at 6 p. m., at the New Illinois Athletic Club, 145 Michigan avenue.

ROBERT T. GILLMORE,
Chairman Alumni Week Committee.

FREDERICK R. GREEN,
Member of Alumni Committee for the N. W.
University Medical School.

News

Many cases of typhoid fever have been reported in St. Joseph and Benton Harbor.

Dr. Scott F. Hodge, Detroit, convicted in August, 1904, of malpractice in performing a criminal operation, and committed to the Ionia Reformatory for a minimum of six years, was released on March 1. The State Board of Medical Registration has decided that his right to practise medicine is forfeited.

An epidemic of smallpox has visited Cottrellville, necessitating quarantine and the closing of schools.

The *North Carolina Medical Journal* and the *Charlotte Medical Journal* have been merged in one publication known under the latter title.

Another merger of medical schools in Indiana has been effected, between the Indiana Medical College, connected with Purdue University, and the Indiana University School of Medicine, the combined schools to bear the latter name.

The Woman's Hospital of Detroit has received an endowment for a laboratory and funds to defray running expenses for a term of years.

Dr. H. A. Barbour, of Wyandotte, has removed to Bristol, Indiana.

Mercy Hospital in Big Rapids has been totally ruined by fire.

A dispensary for the treatment of tuberculosis has been started in Detroit in a crowded section of the east side, by Dr. E. L. Shurly. Funds for the maintenance of the dispensary have been given by private individuals.

The following list of officers has been chosen for the new Michigan Association for the Study

and Prevention of Tuberculosis: President, Dr. C. G. Jennings, Detroit; First Vice-President, Mrs. Huntley Russell, Grand Rapids; Second Vice-President, Dr. A. Abrams, Dollar Bay; Secretary, Dr. A. S. Warthin, Ann Arbor; Treasurer, Dr. H. J. Hartz; Executive Committee, Dr. V. C. Vaughan, Ann Arbor; Dr. E. Heineman, Detroit; Dr. Shumway, Lansing; Dr. Guy Kiefer, Detroit; Mrs. Huntley Russell, Grand Rapids. The President and Secretary are ex-officio members of the Executive Committee.

The Alumni Clinic Week of the Detroit College of Medicine will be held May 20-28. The following out-of-town men will take part: Dr. J. B. Deaver and Dr. H. A. Hare, Philadelphia; Dr. Max Einhorn, New York; Dr. Frank Billings, Dr. J. Zeisler and Dr. Robt. H. Babcock, of Chicago; Dr. Geo. W. Crile, Cleveland.

Dr. J. Roach, of Owosso, has removed to Detroit.

The University of Michigan is to have new buildings for the departments of dentistry and chemistry.

Dr. H. W. Yates, Detroit, is in Europe.

Dr. W. D. Lyman, of Grand Rapids, was recently appointed Assistant Surgeon in the State National Guard.

At the last city election in Ionia, Dr. George P. Winchell was elected Mayor, and Dr. George More, City Physician. Both are members of the County Society.

Marriages

Sidney H. Culver, M. D., Mason, to Miss Laura Gwin, of Kosciusko, Miss., March 2.

William Lowthian, M. D., Unionville, to Miss Mary P. Brookfield of Springfield, Mo., recently.

George C. Griffis, M. D., to Miss Edna Esther Benjamin, both of Detroit, February 19.

Deaths

Richard C. Traver, M. D., died at his home in Somerset Center, March 18, from pneumonia, after an illness of ten days.

Frank A. Howig, M. D., a retired practitioner of Big Rapids, died at his home December 10, 1907, aged 79.

Marcena A. Carroll, M. D., died at his home in Ludington, April 1, from pneumonia, aged 54.

Charles T. Bennett, M. D., of Battle Creek, died suddenly, April 1, from cerebral hemorrhage, aged 70.

Wilbur Gillett, M. D., of Detroit, died in St. Mary's Hospital from cerebral hemorrhage, April 1, aged 56.

A. P. McConnell, M. D., of Ludington, the oldest physician in Mason county, died March 25, aged 82.

A. L. Compton, M. D., of Morrice, dropped dead on a railroad train recently, aged 35.

Obituary

Dr. Hugh McColl, a member of the Lapeer County Medical Society and an honorary member of the State Society, died at his home in London, Ontario, April 19, 1908, aged 64 years.

Dr. McColl suffered from a severe illness four years ago, and retiring from practice made his home with his mother and sister in London. He graduated at Bellevue Hospital College, New York City, in 1871, afterwards taking post graduate work in England and Germany. He was an elder in the Presbyterian church at Lapeer, for over twenty years. He was a man of strong and attractive personality, firm in his convictions, but as humble and gentle as a child. Few men were endeared to old and young alike as he was. His generosity knew no bounds, but his deeds of charity and kindness were so unobtrusive that few knew of their extent. The announcement of his demise from the Lapeer pulpit Sunday, brought sadness to a large circle who in days gone by had long looked to him as their faithful physician and tried friend.

In January of this year, he presented to the library of the Western Medical College his splendid collection of medical works, accompanied with this message to the students:

"Let knowledge grow from more to more;
But more of reverence in us dwell."

His aged mother, now in her 92nd year, and still in possession of all her faculties, and the following sisters survive him: Mrs. Annie Armstrong, of this city, widow of the late James Armstrong, M. P.; Mrs. J. H. Elliott, of Westminster; Miss Nora McColl, who with her mother, nursed and cared for him during his illness, and Mrs. Isabel Eastman, wife of the Rev. Mr. Eastman, of Meaford, Ont.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Etiology of Cyclic Albuminuria.—JEHLE reports on 7 cases of cyclic albuminuria in children between 8 and 16 years. Amount and specific gravity of urine were normal; the albuminous bodies precipitated by acetic acid were always demonstrable, alone or accompanied by ordinary albumin. The amount of albumin was occasionally quite high. The author was unable to observe any striking variations in blood pressure, or any special influence on it of different positions of the body. He thinks that he has observed an etiologic factor in the occurrence of the albuminuria in an altered position of the spinal column. The urine was always free from albumin when the children were in a position which avoided a lordotic position. All the children observed had more than the normal lordosis, the greatest curvature being at the 1st and 2nd instead of the 3rd and 4th lumbar vertebrae. How the lordosis causes albuminuria is not certain—probably either through a direct action on the vessels, or indirectly through a pull on the (possibly too short) ureters, causing twisting of the kidney and stasis. According to these observations, therapy should consist not in milk diet, but in hearty nourishment and exercise. The standing position can be made harmless by proper support.—*Munch. Med. Wochenschrift*, Jan, 1908.

The Clinical Significance of Glycogen in the Leucocytes.—WOSKRESSENSKY concludes:

1. A positive (iodine) reaction for glycogen in the leucocytes indicates a grave condition; infection or intoxication, whether bacterial or non-bacterial.
2. Absence of the reaction is not a proof of the absence of such condition.
3. Positive reaction occurs in pneumonias, recurrent fever, typhus, scarlatina, and progressive suppuration; it is absent in pleurisy, typhoid, small-pox, measles, and malaria.
4. The reaction may serve to differentiate in doubtful cases of pleuro-pneumonia, typhus and typhoid, concealed pus, appendicitis and gynecologic conditions of non-inflammatory characters, and in old cases of appendicitis and typhoid.
5. Absence of the reaction in diseases where it is usually present depends on the strength of the toxins; in pneumonia it makes

the prognosis graver; in typhus better. 6. The occurrence of the reaction in a disease where it is usually absent indicates a grave complication, such as pneumonia or suppuration, or an exceptionally severe course, as in malaria.—*Russ Med. R.*, (*Abs. Centralbl. fur Stoffwechsel*, 1907, p. 709.

A Clinical Method of Estimating the Acetone Bodies.—HART discusses the clinical importance of these bodies in the urine, the unsatisfactory results of ordinary quantitative determinations, and the difficulty of carrying them out in practice, and describes a simple method for rough and rapid estimation.

Gerhard's test (1c. c. of a solution of 50 grams ferric chloride in 50c. c. water to 10c. c. urine) is first applied. If positive this indicates diacetic acid and acetone in excess of 0.2 g. per liter. If the reaction is strong, it is diluted with water until the color approximates that of the standard reagent solution, and the amount of the acetone bodies read from a table given. If the final dilution indicates over 0.5g. per liter, oxybutyric acid is probably present, and may be determined by the polariscope. If Gerhard's test is negative, Arnold's, Legal's and Lieben's tests are applied in the order named. Arnold's reaction indicates over 0.1g. per liter, and Legal's 0.03g. If Lieben's test is positive and Arnold's negative the acetone is within normal limits. All of these tests, with the exception of the polariscopic determination of oxybutyric acid and the distillation for Lieben's test, may be made within ten minutes.—*Arch. of Clin. Med.* Vol. 1, No. 2.

Hot Gelatin Enemata in Intestinal Hemorrhage.—MICHAELIS, in a series of cases of intestinal hemorrhage, mostly typhoid, made use of 5% (in two cases 20%) gelatin clysmata at a temperature of about 120°, in amounts of 250-500c. c. 2 to 4 times daily. In all the cases the hemorrhage ceased entirely. The fear that the mucous membrane might be burned by the hot gelatine was shown to be unfounded by the autopsy on one case which died from other causes. The typhoid ulcers in the case showed no unusual appearances, nor was any injury to the kidneys to be observed.—*Med. Klinik*, 1908, No. 2.

SURGERY

Conducted by

MAX BALLIN, M. D.

Surgical Phases of Enteroptosis.—No case of enteroptosis should be operated upon until medical and mechanical means have been exhausted without relief. Cases of ptosis due to congenital habitus will not be relieved by operation, except in the rarest instances; they should not be considered, therefore, as amenable to surgical treatment. In order to arrive at an accurate estimate of the degree of ptosis, the X-Ray should be employed. In cases following childbirth, where the abdominal wall is very lax, thus destroying the equilibrium between the extra- and intra-abdominal force, resection of the relaxed ventral tissue through the method suggested by Webster, may give perfect relief, provided the diastasis has not been of such long standing that the abdominal organs are far below their normal levels. In the latter case, in addition to the Webster operation, it may be necessary to suspend the colon by means of the omentum, thus relieving the stomach of the weight of this organ, and at least temporarily supporting the stomach until there may be a natural shortening of its ligaments. In a simple gastropsis without marked participation of the colon, the Beyea operation may be the one of preference. If the cardiac end of the stomach has been greatly dilated, forming a kink in the pylorus and a decided notch in the lesser curvature, a no-loop gastroenterostomy may be necessary with closure of the pylorus. (This is merely a suggestion, as the writer has had experience in only one case with this operation.) In exaggerated ptosis of the transverse colon, where a pendulous loop is formed which produces stasis of the fecal current, as well as tending to twist upon itself, with symptoms of partial obstruction, nothing less than excision of the redundant loop with end-to-end anastomosis will cure the case. In cases of redundant sigmoid, with more or less constant pain in the left side, associated with obstinate constipation, a suspension of the sigmoid so as to pull it up out of this bad position in the pelvis may give entire relief. On account of the constant mobility of the sigmoid a recurrence may be noted. In exaggerated cases of redundant sigmoid, attended with symptoms of extreme constipation, verging into obstruction, a resection of the sigmoid may be advisable. In all cases a carefully fitted abdominal support, or carefully adjusted straight front corset, should be worn after operation in order to give as much artificial support as possi-

ble.—JOHN G. CLARK, *Surgery, Gynecology and Obstetrics*, April, 1908.

The Parathyroid Glands.—The parathyroid glands are essential organs. Each gland has a separate and distinct capsule. The average number to a person is about three. They are generally located on the posterior surface of the capsule of the thyroid. Each parathyroid gland has a special parathyroid artery that supplies it and it alone. The destruction of the parathyroids causes death from tetany. Cutting off of the blood-supply causes the same fatal result. The loss of their blood-supply is the more frequent cause of death. To save them and maintain their blood-supply only the arteries that enter the thyroid gland should be cut. The safest method of operating is from above downward. —NORMAN PHILIP GEIS, M. D., *Annals of Surgery*, April, 1908.

Reduction En Masse of Herniae.—In the reduction of the contents of a reduceable hernia, the contents alone are reduced, the sac remaining outside; while in the reduction en masse, both the contents of the sac and the sac are reduced, the sac wholly or partially, according to the degree of en masse present. The danger of reduction en masse lies in its not being recognized and its necessitating a further operation. From 137 cases examined, we know that the surgeon or other medical man was responsible for its occurrence in 50% of the cases. As it occurs through taxis, its occurrence is a warning against the injudicious use of taxis, particularly in small herniae of recent formation and large herniae of long standing. We know from the examination of the recorded experience of others that it is in these two classes of cases that the accident most frequently occurs. The diagnosis of reduction en masse can be summed up in the words "the continuance of the signs and symptoms of intestinal obstruction after the apparent reduction of the hernia" by taxis or operation. If the signs and symptoms of obstruction persist after the reduction of a hernia, the abdomen should be opened and the reason should be ascertained and treated. An important physical sign in some cases is that the upper part of the inguinal canal on the side of the hernia is indefinitely "full" and not empty.—E. M. CORNER, M. D., AND A. B. HOWITT, M. D., *Annals of Surgery*, April, 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

The Indican Reaction as Evidence of Enterogenic Intoxication.—HARRIS A. HOUGHTON, M. D., discusses the details of indican excretion, its chemistry, detection, and significance. He deplores the pessimism felt by many clinicians regarding the value of the tests for indicanuria; although he admits that precise estimations are as yet impossible, nevertheless the methods in vogue are decidedly helpful, if properly performed and interpreted. Indol is the parent of indican, and is formed only in the intestine, during the course of proteid putrefaction and as the result of microbic activity; it is formed mostly in the cecum, ascending and transverse colon, and under normal conditions is not absorbed, because the large bowel does not readily take it up, and moreover the natural patency of the bowel provides outlet for it. Moreover when indol is absorbed, a considerable portion of it fails to be transformed into indican and hence cannot be detected in the urine. The reaction by which the indol becomes indican takes place through the agency of and probably in the liver.

In conclusion, HOUGHTON states that there may be putrefaction without the production of indol, but indicanuria is a sure sign of putrefaction. A maximum reaction for indican indicates excessive intestinal putrefaction and intoxication arising from it. A reaction that is marked, but below the maximum, may be significant, but its interpretation should be controlled by the clinical aspects of the case. A marked reaction which subsides under treatment indicates a lessening intoxication. No interpretation can be placed on a negative reaction.—*Am. Jour. Med. Sc.*, April, 1908.

Primary Carcinoma of the Appendix.—F. KUDO describes eight cases of this form of neoplasm, which mostly were accidental findings in appendices removed at operation. Cancer of the appendix occurs in three types: as simple carcinoma, with scirrhus form of the connective tissue; as adenocarcinoma; and as adenocarcinoma with marked formation of mucus. The last appears to occur especially in older subjects. But it is striking that in general the disease more often

affects young individuals; thus KUDO mentions one case in an eight-year-old child, and the collection of cases reported in the literature supports this observation. The tip of the appendix is the favorite seat of the tumor, and it rarely is found in the middle or the base. The growths are mostly very small, and may easily escape detection, as in a case of the author's in which there was diffuse carcinomatous infiltration of an obliterated appendix without any thickening. In many cases only the mucosa and submucosa are attacked, rarely are the serosa and muscularis involved. These tumors almost never metastasize; their slow growth and benign character depends perhaps on the structure of the appendix, whose narrow lumen and powerful muscle-wall appear to hinder the rapid spread of carcinoma. The relation between appendix-carcinoma and appendicitis is questionable; probably the carcinoma is the exciting cause of the inflammation, from its stenosing effect.—*Zeitschr. f. Krebsforschung*, Bd. 6, 1907, H. 2.

The First Stages of Pulmonary Anthracosis by Inhalation.—HOCHÉ and FINCK experimented on puppies of similar breed, placed in a cage with freely circulating air. A control animal showed no trace of anthracosis. One puppy was placed under a large bell-jar, with a turpentine lamp, whose smoke soon filled the jar. The animal was killed after 20 minutes; the nostrils showed a thick layer of soot, the pharynx was black with it, likewise the oral cavity and the esophagus as far as the cardia; trachea and bronchi were slightly reddened and covered with fine granulations and blackened mucus. The lungs were grayish, especially in the lower lobes. Further experiments under varying conditions gave confirmatory results. Microscopically the soot was found to have penetrated even to the peripheral alveoli, and the cells in the lymph spaces contained particles in their protoplasm. These cells were round or oval, were free in the alveoli and bronchioles, and were probably exfoliated. Similar cells were seen in the lymph spaces of the alveolar walls, and in the bronchial lymph nodes.—*Compt. rendus heb. de la Soc. de Biol.*, 1906 Nr. 38.

LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

Rosenmuellers Fossae and Their Importance in Relation to Middle Ear Diseases.—EMERSON claims that there is very frequently found in the fossae of Rosenmueller, in adults as well as in children, a large amount of degenerated adenoid tissue, which can be seen by posterior rhinoscopy in only a small percentage of cases. A digital examination is necessary for diagnosis, and this should be done as a routine procedure.

Pathologically three varieties of adenoid tissue may be found in the vault of the pharynx. A soft variety, composed almost entirely of lymphoid structure, exists, which appears as a smooth semi-fluctuating mass, spreading over almost the entire naso-pharynx. This is very friable and is covered with a thin layer of epithelium. A second variety has very little increase in actual gland structure, the enlargement being due to stasis and edema, produced by leakage from the vessels. The hard or hyperplastic variety presents increased lymphoid structure, with decided overgrowth of connective tissue elements. It is the first variety which seems to determine pathological processes in the fossae. This is of importance (1) because its presence is an active factor in causation of recurring pharyngitis in adult life from direct continuity, and by interfering with the action of the levator palati and tensor palati muscles. It is of etiological importance in pharyngitis lateralis. It also may be a portal of systemic infection and by obstructing venous return from the tympanum and labyrinth cause tinnitus. Clinically, its arrangement is as follows: (1) One or more bands pass from the posterior upper part of the recessus pharyngeus to the eustachian tube. These can be seen by posterior rhinoscopy. (2) The entire fossae may be filled with a soft friable mass which is smooth and which cannot be seen by the eye. The finger, however, sinks into it and easily removes it. (3) The recessus is studded with irregular masses which may be scattered, though not large in amount. This form can be detected only by digital examination. The author has found degenerate tissue so often, and its removal has been attended by such immediate results, that he does not feel justified in subjecting a patient to prolonged treatment without digital examination of the fossae without reference to age. It is indicated absolutely if there are present the classical symptoms of stuffiness, fluctuating hearing, tinnitus and recurring unilateral salpingitis.—*Annals Otology, Rhinology and Laryngology*, Sept., 1907.

Contributions to Killian's Radical Operation for Chronic Frontal Sinus Empyema.—MADER takes up the end results after a period ranging from 6 mos. to 3 yrs, of 14 cases of chronic frontal sinus empyema, operated according to Killian's method. The headache was either entirely and permanently cured, or at least markedly relieved, to reappear only during bad weather. Often the pain persisted during the convalescence, to disappear after healing had taken place. Less satisfactory results are obtained as regards the secretion. In the best cases, it was very slight, but many times there was observed only a transformation of the purulent into a mucous or muco-purulent secretion of lessened amount. Total obliteration of the cavity never took place, only a partial. The cavity was filled with a kind of scar tissue, capable to a certain extent of secretion. The cosmetic result was without doubt the point par excellence of this method. As a rule it was excellent; although exceptions were noted, when the sinus presented exceedingly large recesses upward and outward. The general condition of the patient improved in every case, occasionally strikingly so. The symptoms on the part of the nervous system were always influenced for the better. Many recovered entirely. The most unfavorable cases in this regard were those of marked neurasthenia. Nose and throat conditions improved with the diminished secretions. Every patient was able after the operation to resume his or her work, mental or physical as the case might be. The author considers that no other method, all points considered, offers such good uniform results, and he does not hesitate to designate it as the most useful and most worthy of recommendation of all methods thus far described.—*Archiv. fur Laryngologie*, XX-1.

Pneumocele of the Frontal Sinus.—ROSENBERG reviews the cases of pneumocele of the frontal sinus so far described in the literature. As etiological factors appeared most commonly injury of the anterior wall, the result of trauma or of operative interference. Suppuration within the sinus also caused pneumocele. According to v. Helly, the inflammation produced a thrombosis of an emissary vessel,—a place of least resistance, through which air and pus could pass. Congenital perforations exist rarely, but their possible existence must be borne in mind.—*Archiv fur Laryngologie*, XX-1.

DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

Observations on Skin Diseases in the Negro.

1. In spite of the fact that the negro is more susceptible to disease in general than the white man, and that his mortality is twice as great, he suffers less frequently and less severely from diseases of the skin.

2. The negro skin is decidedly less susceptible to external irritants.

3. The full-blooded negro is almost immune to ivy poisoning.

4. Acne is less common and much less severe in the negro. Rosacea is a rare and very mild affection. Eczema is perhaps not less frequent, though certainly less severe. Psoriasis in the full-blood negro is very common.

5. Tuberculosis of the skin is not more common in the negro in spite of the great prevalence in this race of pulmonary and other forms of tuberculosis.

6. Syphilis is certainly more common in the negro than in the white. It is probably not more virulent. Tertiary forms are not more common. A tendency to be annular syphilide as well as to keloid, elephantiasis and fibroma, deserves to be classed as a racial peculiarity of the negro.

7. The negro is more subject to new growths of connective tissue origin and less so to those originating in epithelial structures. Cutaneous epithelioma is very rare in the full-blooded negro.

8. The mucous membranes as well as the skin are less susceptible to disease. Leukoplakia is seen in the negro with extreme rarity.—HOWARD FOX, M. D., *Sixth International Congress*, New York, Sept. 1907.

Verrucae Plantares; Their Prevalance in Boys and in Young Men.—"When the plantar wart is of recent date, it shows itself in the form of a slightly reddened elevation covered with a thin epidermis. When this covering is removed, bleeding appears from a number of orifices.

"Most often, however, the lesion presents at first sight the aspect of a large and extremely tender callus. The horny layer is thickened and elevated; sometimes the central part of this horny plaque is perforated by a sort of well, more or less deep, especially if there has been an attempt to scrape it off. If, however, the lesion has not been molested for some time, the superficial horny layer forms a complete covering.

"When the surface of the lesion is cut with a knife, the periphery of the lesion is found to have a hard, semi-transparent, horny layer, much like normal horny epidermis, or that which constitutes calluses and corns. Instead, however, of penetrating deeply into the corium with a horny

mass as does the corn, this lesion possesses a soft and depressible central portion. It takes the form of a ring perforated by an orifice which becomes larger as one goes more deeply. This central part possesses a tissue of a very different appearance, a horny tissue, to be sure, but white, opaque and milky; it is soft and resistant to the knife like wet tow.

"While the horny ring at the periphery is homogeneous or stratified, the central part appears to be fasciculated and formed of columns which penetrate vertically downwards. Frequently a dark, hemorrhagic point is seen, and most often, if one continues to cut successive layers of the lesion, drops of blood are poured out from a large number of capillary openings which dot the surface.

"It is at first difficult to make a curette penetrate into this soft and tenacious tissue. When once, however, the curette has reached its base, a soft, white, milky tissue is removed, which is divided into columns that run perpendicularly from the surface to the base."

Such is Dubreuil's description of this affection upon the soles of the feet.

Treatment. In a considerable number of cases salicylic acid in collodion in 10% strength was sufficient, after some time, to remove the lesions. It was painted on daily, and the foot soaked every other day for twenty minutes in hot water, and then pumice soap used to remove as much of the lesion as possible, and then the painting renewed; much the same treatment that is used in the case of corns.

Many cases, however, will not respond to this treatment, and BOWEN has had some success with chryasorbin, which was added, in 10% strength, to the salicylated collodion. In other cases success was attained by covering the lesions constantly with a 60% salicylated gutta percha plaster.

The late Dr. Warren of Groton, who had treated a large number of these cases in the boys of Groton School, had come to the conclusion that the Paquelin cautery was the best, surest and quickest method. He first eocainized the wart, and with a round point of the Paquelin cautery thoroughly cauterized, beginning at the center and sweeping round the whole periphery of the wart. This method he considered almost painless, produced the smallest possible scar, and needed but one sitting, if carefully done.

Electrolysis has been effective in DR. BOWEN's hands, but without thorough local anesthesia it is very painful, and the same may be said of the strong caustics.—JOHN T. BOWEN, M.D., *Sixth International Congress*, New York, Sept., 1907.

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OPSONIC THEORY AND TECHNIC.*

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In discussing one of the factors in the production of immunity, we are likely to consider it alone, without taking into account other factors which are perhaps of equal importance. This is especially true when our attention is directed to the theoretical side of the subject. We are apt to think that the latest theory of immunity, supported, it may be, by a large amount of experimental and more or less clinical evidence in its favor, supplants and renders obsolete earlier theories. This, of course, may be true, but more often it is not true. It more frequently happens that while the acceptance of the new theory forces some modification of the earlier views, it supplements the older ideas and makes clear some points which were before obscure. This is particularly true of Wright's opsonic theory. Not only has it not supplanted the older theories, but it has actually rehabilitated one of them and brought into prominence one of the forces in the production of immunity that had fallen into more or less obscurity. I trust you will pardon me, if for the sake of a better perspective, that

we may see more clearly the relation that the opsonins bear to the other factors in the production of immunity, I recall to your minds, very briefly, some of the earlier conceptions.

It may not be amiss to begin by stating, on what factors, to my mind, our comparative freedom from infectious disease depends. Broadly speaking, they are two.

First: Those influences limiting the power of bacteria to enter the body, and there multiply and produce substances poisonous to the body.

Second: The forces exerted by the body tending to destroy these bacteria which have entered the body and are there multiplying and producing poisons, and those forces exerted by the body tending to render harmless poisons produced by such bacteria.

In a broad sense the condition we know as immunity depends both on limitations of the bacteria, and resistance on the part of the body; in a more restricted sense, when we speak of immunity we refer to a condition of resistance, either natural or artificial, to bacteria and their poisons. We will see that the earlier efforts to explain im-

*Read before the Wayne County Medical Society, March 2, 1908.

munity took into account only the first factor; that theories based on the limitations of bacteria for growth and multiplication in the body afforded insufficient explanation, and that the later theories have been more concerned with the second factor—that is, the resistance of the body to infection.

Pasteur made the earliest effort to explain immunity. He suggested that immunity might be due to the exhaustion of certain elements necessary for food, by bacteria growing in the body, and that these substances were reproduced but slowly. This was known as the exhaustion theory, and seemed to explain very well the known facts that bacterial diseases are self-limited and that an artificial immunity to some bacterial diseases can be produced by the inoculation of living but attenuated bacteria, for after a certain micro-organism has grown in the body and used up all the elements necessary for its growth, it will no longer be able to grow, and will die, and until these necessary elements have been reproduced, the animal will be immune to infection with this particular germ. A single fact served to overthrow this theory. It was observed that Algerian sheep were immune to doses of anthrax bacilli sufficient to kill French sheep, but that they would succumb to much larger doses. Now, if the food supply for a few bacteria were absent, how could a much larger number find suitable pabulum?

To meet these objections Chauveau brought forward the theory that bacteria developing in the body elaborated substances harmful to themselves and these substances were retained in the body for some time. This was known as the "Retention Theory," and in accordance with it bacteria could not grow in the body so long as these harmful substances were retained. While the theory as here stated cannot now be offered as an explanation of immunity, it comes

much nearer to our present conceptions than does the exhaustion theory, for bacteria multiplying in the body certainly play a part in the production of substances by means of which they are destroyed and their poisons are neutralized.

The striking thing about both these theories is that neither takes into account any activity of the body in resisting infection. The body plays an entirely passive part in the process. It is merely a great natural culture tube in which bacteria grow and multiply until they are starved out by exhaustion of the food supply, or are destroyed by their own excrementitious matter.

Metchnikoff was the first to see that the body played an active, not a passive part in the production of immunity. He observed that certain unicellular animals had the power, by means of their amoeboid motion, to engulf and digest food particles, and that certain of the body cells, notably the polymorphonuclear leucocytes, possessed the power of amoeboid motion. It was also noted that in many of the infectious diseases the polymorphonuclear leucocytes circulating in the blood were largely increased in number. Metchnikoff suggested that this increase was the result of a stimulation of the body by the invading bacteria or to the production of substances which attracted the leucocytes to the point of infection and that the function of these cells was to engulf the bacteria and thus destroy them. He named the leucocytes phagocytes, and called the phenomenon phagocytosis. That phagocytosis occurs was easily demonstrated,—the process is very evident in gonorrheal pus,—and Metchnikoff drew a graphic picture of a great battle waged between two armies—the invading bacteria, and the defending phagocytes. This theory has had an immense influence on our conceptions of immunity, and held undisputed sway until it was in a measure displaced by Ehrlich's theories. For a time Ehrlich's

theory almost obscured Metchnikoff's cellular theory, but recent investigations, more especially Wright's work on the opsonins, have shown that it is by no means to be disregarded, and today Metchnikoff's theory, modified, it is true, in the light of more recent investigations, is regarded by most bacteriologists as explaining an important part of the mechanism whereby the body protects itself against invasion by pathogenic bacteria.

The next great advance in our knowledge of immunity came as a result of the announcement of Ehrlich's so-called side-chain theory. In all its details and ramifications this theory is so exceedingly complex, that it is entirely outside the scope of this paper to discuss it minutely, much more than the whole time at my disposal would be necessary for an adequate presentation. Its broad outlines may, however, be briefly drawn.

In distinction to Metchnikoff's cellular hypothesis, Ehrlich put immunity on a chemical basis. Living protoplasm is an unstable compound of constantly changing composition. It possesses an enormous capability of entering into new combinations, of adding to, and splitting off from itself elements and compounds. For example, it unites chemically with oxygen and other food materials circulating in the blood and splits off carbon-dioxide and water. Just as the protoplasm of the body cell enters into chemical union with food substances, so it may unite with bacterial cells or their poisons. Ehrlich believed that the only way bacteria or their poisons can exert a harmful influence on the body is by such chemical union with its cells. There is, however, a marked difference between the union of the body protoplasm with food substances and its union with bacteria and their products. The union with food substances is loose, easily broken down; the union with bacteria and their products is firm, not eas-

ily broken down. The atom groups concerned in this union are therefore lost as far as the normal functioning of the cell is concerned. The inability of the cell to make use of these atom groups results in an impairment of its functioning power and a stimulus to the production of other identical atom groups to replace those lost. These atom groups are produced in excess of the needs of the cell and the excess is cast off into the blood stream, ready as anti-toxic and anti-bacterial bodies to neutralize the combining power of the bacteria and their products and by the exertion of a dissolving power, to destroy them. Immunity, then, results when the body has, circulating in its blood stream, a sufficient quantity of anti-bacterial substances of various kinds to protect it from the action of the invading bacteria.

Immediately on the announcement of this new theory, the bacteriologists of the world were divided into two groups, the adherents of Metchnikoff, who supported his cellular theory, and the followers of Ehrlich, who advocated his so-called humoral theory. For some years Ehrlich and his followers had the better of the argument until Wright and Douglas showed that neither Metchnikoff nor Ehrlich told the whole story and that our conception of immunity must be broad enough to include both cellular and humoral activity. Wright and Douglas found the connecting link between the biologic phenomenon of phagocytosis and the chemic action of the anti-bodies.

They found among the substances circulating in the blood, certain bodies which favored phagocytosis. They found that in the absence of these bodies phagocytosis would not take place, or would occur only to a slight degree, but that as a result of the growth and multiplication of pathogenic bacteria in the body, these substances were largely increased in the blood stream. It was

also found that these bodies were present in the serum, that they acted on the bacteria and not on the phagocytes, and were different for different bacteria. They called these bodies opsonins, from the Greek verb *opsoneo*, which means "I prepare food for."

The method of determining whether the action of the opsonins is on the phagocytes or on the bacteria is of sufficient interest to mention. If leucocytes are subjected to the action of serum known to contain, for example, staphylococcus opsonin, are then washed and mixed with a suspension of staphylococci, phagocytosis does not take place. If, however, an emulsion of staphylococci are subjected to the action of serum known to contain staphylococcus opsonin, are then washed, and mixed with washed leucocytes, active phagocytosis at once occurs.

It will be readily seen how this broadens and unifies our conception of immunity, for not only does Wright's work give new support to Metchnikoff's cellular theory, by demonstrating that phagocytosis is an important factor in the production of immunity, but it supports Ehrlich's humoral theory by showing that phagocytosis does not occur without the help of substances circulating in the blood stream, as a result of the growth and multiplication of bacteria in the body. It unites two different and more or less antagonistic conceptions of immunity into a homogeneous whole.

If Wright had stopped here, his work would have been of great value. but he went further and on the basis of his theory, developed a practical method of treating certain infections, many of which were extremely resistant to other modes of treatment. He thus added to an important contribution to the science of medicine, an equally valuable contribution to the art of medicine.

He found that small doses of killed

cultures of the micro-organism that was causing an infection would markedly stimulate phagocytosis of the germ in the body—that this increase is preceded by an initial decrease in phagocytic power, that the effect of repeated doses of these killed bacteria is not cumulative, that a vaccine made from a culture isolated from the patient—the so-called autogenous germ—is more efficient than a vaccine made from a stock culture of the same organism, and finally that the results of this treatment were often all that could be desired clinically. Before bacterial vaccination could be successfully applied to the treatment of infections, it was necessary to devise some method of estimating the amount of opsonin in the patient's blood. This was necessary because, since the first effect of a bacterial vaccine is to cause a decrease in phagocytic activity, or a "negative phase," it is important not to give the second dose during the negative phase caused by the first; because since the effect of repeated doses is not cumulative, the second dose should not be given until the effect of the first is largely passed, and because if the patient's phagocytic power is high before treatment it is probable that vaccination will not further increase it, and will therefore be of no value.

Inasmuch as the opsonins are bodies of unknown composition we have no direct method of estimating the opsonic content of the blood. We can, however, determine the ratio of the amount of opsonin in one serum to the amount of opsonin in another serum. If, therefore, we obtain the ratio of the amount of opsonin in the patient's serum to the amount of opsonin in a normal serum, we will find out just how much this amount differs from the normal. In other words, we can say that the patient's serum contains twice as much, two-thirds as much, or half as much opsonin as the normal serum. This is

sufficient for practical purposes, for while we have no knowledge of the actual amount of opsonin present, we do know whether it is increased or diminished, and how great this increase or diminution is.

The method of determining this ratio depends on two facts:

First: The opsonins are found in the blood serum.

Second: The opsonins act on the bacteria, not on the leucocytes.

Leucocytes, if washed free from serum, may then be obtained from any source. If now equal volumes of washed leucocytes, serum, and an emulsion of bacteria isolated from the patient be mixed and incubated for a short time; if smears made from this mixture are stained, and the bacteria found in a large number of leucocytes counted, by dividing the number of bacteria by the number of leucocytes counted the average number of bacteria which leucocytes will ingest, when treated for a known length of time with the serum used may be determined. If another test be made, under identical conditions, except that another serum is used, the average number of bacteria which the same leucocytes will ingest when treated with this other serum, may be determined, and the ratio of the opsonic content of one serum to the opsonic content of the other is easily found. This ratio is called the opsonic index.

For example, we have two sera, A and B. We mix equal volumes of leucocytes, bacteria and serum A—and leucocytes, bacteria, and serum B; we incubate both mixtures at the same temperature for the same length of time, and find the average number of bacteria ingested by the leucocytes in the first mixture is 4; and that the average of bacteria ingested in the second mixture is 3. If serum A is the normal serum, and serum B is the patient's serum, then the patient's opsonic index is $\frac{3}{4}$. That is to

say, the patient's serum contains only $\frac{3}{4}$ of the normal amount of opsonin. Another method of determining the opsonic index has been suggested. This is to find the dilution of serum which just increases phagocytosis. From a comparison of the dilution at which two sera just increase phagocytosis, the ratio of one dilution to the other is found and this ratio represents the opsonic index.

The making of the vaccine is a simple process. It consists of making an emulsion of the bacteria in physiological salt solution, then mixing a volume of the emulsion with an equal volume of normal blood. Smears are made from this mixture and the ratio of the number of bacteria to the number of red blood cells is determined. From this ratio, assuming that normal blood contains 5,000,000,000 red blood cells in the cubic centimeter, it is easy to find the number of bacteria in a cubic centimeter of the emulsion. The emulsion is then sterilized and diluted to the desired strength.

While this method of treatment has been found very valuable in selected cases, and in the hands of certain men, there are certain difficulties in the way of its general adoption, even in suitable cases.

1. The estimation of an opsonic index is a time-consuming procedure. While, of course, a number of estimations, especially if they are all with the same germ can be made with much greater economy of time than a single one, still ten or twelve estimations in a day are probably the limit of one person's ability if he gives his whole time to this work, and I doubt if this could be kept up day after day without ruin of the eyes.

2. The technique is exceedingly delicate. One must not only be a trained laboratory worker, but must have considerable experience with this kind of work for his results to be constant and reliable. This practically limits opsonic therapy to those who have had adequate

laboratory training, and who are able to devote all or a large part of their time to this work.

3. On account of the time-consuming character of the work and the special training required, opsonic work is of necessity expensive.

4. With our present technique, the margin of error is large. This must be so when we consider the relatively small number of bacteria and leucocytes on which we base our averages, and the relatively small differences we estimate by means of those averages.

Most important of all, we are without a suitable normal standard for comparison. It can be readily shown that the opsonic content of any blood is not constant, but varies from day to day. If our so-called normal serum varies in opsonic content, how can we obtain any accurate idea of the variations in opsonic content of the patient's serum, when our only standard for comparison is not fixed, but constantly shifting? An effort has been made to overcome this difficulty by mixing several normal sera and using the mixture as a "normal." This

lessens, but does not eliminate error from this source, and makes the method of estimating opsonic indices more difficult and cumbersome.

These difficulties do not condemn, they only limit the application of opsonic therapy. The experience of those who have done much of this work goes to show that bacterial vaccination regulated by careful observations of the opsonic index is amply justified by clinical results.

If opsonic therapy stands the test of time and trial, and justifies the expectations of its enthusiastic advocates, it is only a question of time when its applicability will be greatly broadened in two ways:

First: A simpler and more accurate method of estimating the opsonic index will be developed, and

Second: With an increasing knowledge of the effects of bacterial vaccination, it will become possible to regulate the treatment more and more by clinical observation of the patient, and estimations of the opsonic index will become less and less essential.

Uncontrollable Vomiting of Pregnancy.—

The prevailing view of the etiology of this condition, that it is a form of intoxication, has received valuable confirmation by a recent case reported by WINTER. Besides the vomiting, the symptoms with which Winter's patient suffered were irregular pulse, marked mental disturbances, for the most part of a maniacal nature, albuminuria, slight jaundice and fever. The mental symptoms had cleared up somewhat under diuretic treatment. The pathologist, knowing nothing about the clinical diagnosis, reported lesions suggestive of an intoxication, calling attention to fatty degeneration in the liver acini, and degeneration of the kidney epithelium, with ecchymoses.

WINTER believes that the vomiting is at first merely a reflex neurosis. If it persists, this neurosis injures the functioning of the liver and kidney, causing a retention of water products and fatal intoxication. During the first stage, every measure to quiet the nerves should be employed, such as rest in bed, and suggestion, if necessary.

Food should be supplied liberally, even if vomited, and large quantities of water given, in order to keep the kidneys and liver actively working. The water should be given per rectum (in order to reach the liver), three or four quarts being given a day. In case symptoms of intoxication develop, the pregnancy should at once be interrupted. If some reliable test for the work done by the liver could be devised, it would be a great aid, as then the pregnancy could be terminated before serious lesions occur in the liver. WINTER calls attention to Williams' test of the amount of ammonia in the urine, which rose from 4 to 38 per cent in his cases. The Strauss levulose test might be employed. Loss of weight is no criterion, as this results largely from the loss of fluids.

The toxemia and the neurosis, then, are but two stages of the same process. Every effort should be employed in preventing the passage from the first to the second stages. *Zent. f. Gyn.*, Nov. 30, 1907.

THE PSYCHIC TREATMENT OF NERVOUS DISORDERS.*

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Eaton Rapids.

In speaking of the treatment of nervous diseases, the question arises, What are the diseases that come under this category?

In times past the entire class of neuroses was based on a negative conception, at a time when pathological anatomy, having undertaken to explain disease by changes in the organs themselves, found itself brought face to face with a certain number of morbid states for which no reason could be found. The number of neuroses ought, therefore, to diminish with the progress of pathological anatomy; for just as soon as a lesion is discovered, that satisfactorily explains the symptoms observed during the lifetime of the patient, the disease should be stricken from the list of neuroses, and in such cases an anatomico-pathological name should take the place of the clinical one. So that, when pathological anatomy discovers a lesion, a focus of inflammation, a hemorrhage, a thrombosis, and when chemical analysis discloses a condition of intoxication, we no longer speak of neurosis, even though the symptoms might have been essentially nervous. In syphilis, tuberculosis, arterio-sclerosis, alcoholic intoxication, uremia, etc., we recognize a first cause. This first cause does not exist in affections which we call neuroses; even when we succeed in revealing the cellular changes which have produced the nervous or mental trouble. It is at this point that we are brought face to face with a fundamental factor: the influence of the mind and of mental representa-

tions. The affections of the psychic life are not determined by primary change of cerebral tissue as in general paralysis. The source of the trouble is psychic, and it is the ideation which causes or harbors nervous disorders. It is at this point that we, as physicians, have failed. We have been looking for first causes, and not having found them, have turned our cases over to others, and so in a large measure are responsible for empirical psycho-therapy in its many allied forms, mental healing, Christian science, and the like.

Having eliminated the neuroses, which are probably somatic in origin, we have left in a group the affections in which the psychic influence predominates, those which are more or less amenable to psycho-therapy. They are:

Neurasthenia, hysteria, hysterical-neurasthenia, the lighter forms of hypochondria, melancholia and certain conditions of very serious disequilibrium, bordering on insanity.

For all practical purposes, we can suppress the clinical names of the above group and use the common term—nervousness. It is to this nervousness that the treatment by psycho-therapy is particularly applicable. It is in this domain we witness a slow but continual transformation of our medical ideas, full of import to practical medicine.

The conception that we as physicians should have in mind, if we wish to undertake the treatment of nervous disease with success, is this:

Nervousness is a disease pre-eminent-ly psychic, and a psychic disease needs

*Read before the Montcalm County Medical Society at Lakeview, April 9, 1908.

psychic treatment.

These psychio-neuroses are frequent, they are often very serious, and much more than organic troubles; they can destroy the happiness of individuals and of families.

The physician who interests himself in the life of his patients, who paints, as it were, the secrets of their souls, is moved by the suffering which he sees. He sincerely pities these unfortunate beings and sympathizes with them.

Bodily illness, however painful it may be, seems to him less cruel than these psycho-neuroses, which attack the individual, the very ego. Patients themselves are aware of this change in their mental condition, and often envy all sorts of people who are suffering even with painful diseases, but whose mental condition is not affected. To add to the misfortune, nervous patients are often misunderstood. They often keep up an appearance of good health for a long time. They show very great variations in their disposition; today suffering martyrdom, and tomorrow able to take up their work with a certain briskness. Their relatives and even the most loving and best meaning, do not know what to think of these fitful changes. They get into the habit of reproving the patients for their laziness and caprices, and their lack of energy. Their encouragements are taken in the wrong spirit and only serve to increase the irritability, sullenness and the sadness of the poor nervous people. The overwhelming influence of emotions of all kinds on the development of the psycho-neurosis is perfectly obvious. But alas! the great majority of us go about as if we never noticed it. We are so impressed with our role of physician to the body, that we are always hunting among the organs of the abdomen, pelvis, or thorax for all the psychic and nervous troubles.

To study patients is not to cure them; to be sure, we are on the right track,

armed with the microtome and the microscope, right when we study the chemistry of the organism and apply the exact clinical methods of modern medicine to the study of mental diseases. We cannot, I say, go too far along these lines, but on the condition that we do not forget psychology, and the unmistakable influence of the mental over the physical, for, properly speaking, psychology is only a chapter of physiology, of biology, and we are guilty of a pleonasm when we speak today of physiological psychology. The study of psychology is physiology in its essence.

Narcotics play too important a role, and often the right word or a rational suggestion will replace to advantage the use of morphine, chloral or sulphonal. A heart to heart talk with these patients is worth considerable more to them than douches, baths or chloral.

Please do not misunderstand me at this point: we must not abandon scientific ground, we must continue to study man with all the precision of modern biology, but we must not forget that the brain is the organ of thought, and that there is a world of ideas.

To be sad is a mental state, it is, therefore, a psychic manifestation, but we recognize in it a physical substratum since every act of consciousness must have a corresponding cerebral state. In its essence the phenomenon is psychophysical, as is everything that takes place in our mentality. But the expression of it is psychic—it is translated by discouraged words and by abnormal volitions. On the other hand, this disposition of mind can be provoked by mental representations and ideas. It is, therefore, of ideo-genic origin. It can, on the other hand, be due to a poison affecting the nerve-centers; we then recognize a somatic cause for it. When we say of an individual that he raves, we characterize at the same time his mental state and the cerebral trouble

that is indicated. We perceive at the same time the two sides of the phenomenon. Sometimes this raving is the result of unbounded joy. It is then psychological in its origin. At other times it is due to alcoholic intoxication, or to the absorption of opium; it is then somatic from the point of view of its cause.

To the eyes of most people, pain is physical. The thought springs immediately to the cause, which is in fact, generally material, and sick people make a great effort to have not only the unquestioned reality of their sensation recognized, but also the absolute materiality of the phenomenon. This popular view is too summary.

To suffer presupposes two things: on the one hand a material condition of certain groups of nerve cells—a physical phenomenon; on the other hand a sensation perceived, a process that is psychic in its essence.

The existence of pain does not by any means inform us concerning its cause. To seek this cause is our ulterior problem, whose solution does not always belong to the patient. The same pain, as real as a conscious act, real also as a concomitant cerebral state, may have as its cause a lesion of the tissues or an irritation attacking the neuron in its continuity.

It may, perhaps, be due only to mental representations, to fixed ideas or to auto-suggestion, born in a psychological way. The pain in itself is none the less real on this account.

We are in the phenomenon of a physiological nature, in the strict sense of the word, when the electric irritation of the inferior cardiac branch of the sympathetic, causes acceleration of the heart beat.

We drop right into genuine psychology when an emotion causes the palpitations.

Tears can flow by mechanic or chemi-

cal irritation of the conjunctiva; they also accompany our sorrows and our joys. The appetite is normally created by the need which the organism feels of renewing its stock of energy, but it can be stimulated by the sight of an appetizing dish, or by a gustatory memory; it can be suppressed, on the contrary, by a moral emotion, or by disgust. It makes very little difference whether the disgust be provoked by the sense of smell or by a purely mental representation due to a verbal suggestion.

Vomiting may even occur as a result of such a reaction, which is ideogenic in its origin. It is important, therefore, to recognize that the same physiological manifestations and the same pathological troubles may have physical or moral causes. It is self-evident that they may be associated.

These ideas ought to be kept in mind in studying the reciprocal influence which the physical and the moral are constantly exerting one upon the other.

To make the subject matter practical allow me to cite a case:

The wife of a minister suffered much pain in abdomen and pelvis, with nausea and occasional vomiting. Her physician advised an operation upon her appendages and she was taken to the hospital. Upon her return, her nausea and vomiting persisted. It was at this time that I was consulted, and upon careful physical examination, I could find no cause for her serious vomiting which had become persistent. Upon a closer study of her condition I found that while she had a high sense of morality, her mentality was unstable; she did not inhibit well. She was greatly concerned as to her responsibility as that of a pastor's wife, and suffered greatly at the moral depravity that existed on every hand. I explained to her how moral disgust could produce nausea and vomiting, and that if she could inhibit the impressions that came to her, she would be cured. She accepted the suggestion kindly, and after several conversations her vomiting ceased.

The object to keep in mind in the treatment of neuroses, is to make the

patient master of himself. The means to this end is the education of the will, or, more exactly, of the reason.

Time will not permit us to go further into the philosophy of this most interesting subject. I will, therefore, conclude by illustrating a few cases:

Some time ago I was called to treat a patient suffering at her menstrual time. She was in a rigid condition, her friends about her were resorting to all measures for her relief but to no avail. I immediately called for some hot water. Thereupon I proceeded to fill my hypodermic with water, quickly inserted it into the arm and requested that all should leave the room and that the patient would soon drop to sleep. I then said to the patient: "You will, no doubt, feel a certain dizziness from the result of the injection, but do not mind that, you will soon be free from pain." I soon asked her if she could feel the effect of the hypodermic, to which she replied that she began to feel dizzy. The feeling soon passed away, however, for she soon dropped asleep.

Upon making my visit to her the following day, she expressed her pleasure upon the quick effects of the injection, and requested to know what it was that relieved her so quickly, whereupon I proceeded to tell her the true situation. I said: "The medicine I gave you last night was water. You were in no condition at that time to be reasoned with, because you were in pain—neither did I think you were in a position to understand. Your pain at first was uterine, and had you inhibited the uterine impressions that came to your brain, it would have ended there. You, however, refused to inhibit, until it reached to your finger tips and all parts of your body, causing you to have spasms. The pain from which I saw you suffering was not uterine, so much as it was that from general cramp, in which you held yourself for an hour. You had allowed the uterine pain to shunt downward, along all your nerve trunks."

She was satisfied with the explanation and seemed to thoroughly understand, and since that time has been able to manage herself without any further trouble.

In the exercise of the art of healing, the moral influence plays a very important role.

In the management of these cases it becomes necessary for the physician to vary his methods according to the indications of the moment. He may have recourse to the most varied physical measures, or he may limit himself to the influence of psycho-therapy. It is often necessary to associate them. I have in mind a case upon which pure psycho-therapy had its effect:

The case briefly stated is that of a young married woman who had been bed-ridden for a year. Her physician had run the gamut of liver disease, heart and stomach disease and uterine trouble. When I saw her she was in a starving condition, having refused food for nearly a month. After making a careful physical examination, I proceeded to tell her that her physician had cured her of all her ills, and that she was absolutely well, but that within a month she would be in her coffin unless she willed to get out of the bed and begin eating. She refused by saying she knew her heart would stop if she left her bed. I then informed her that a physician could do her no good, took my hat and case and left the house. After I had gone some distance, her mother called me back and said that she believed if I would manage her properly, that I could help her. I walked rapidly into the room, stood by her bed and said, "Your life depends upon getting out of that bed and sitting in that chair. Your heart will not stop beating." She managed herself from the bed to the chair and I conversed with her some time and called upon her the following day and had her removed to another house, and in ten days sent her fifty miles away to a resort where she regained her strength.

Another case in which it seemed necessary to combine measures other than simple psycho-therapy was that of an old man who had been in bed for a long time, suffering from inanition. All remedial measures had failed. He became despondent and all efforts at happy suggestion were of no avail. My visit to him was on a cold winter's day; as I was driving from my barn I chanced to see my linen duster and straw hat. I put it under the seat of my cutter and took it along. Before entering the house, I removed my fur coat and donned the hat and duster. Upon entering the house, I proceeded to take a chair and began fanning myself with my hat in all seriousness. The old man took in the situation

at a glance and began laughing heartily. I had succeeded in reaching a point in our philosophy which was common to both through the ridiculous. The patient's recovery was assured.

I know that in order to practise this beneficent psycho-therapy it is not necessary to have cut and dried opinions on philosophical subjects. A little tact and kindness are enough. Sometimes in the case of mistaken diagnosis, where the patient has lost faith in the physician and his remedies, it becomes necessary to find a point of faith common to the patient and the family before a cure can be effected.

A young married woman had been in bed for two years and a half suffering from what had been diagnosed as cancer of the stomach. She had acquired the habit of vomiting each day. The vomitus was of a suspicious nature, but upon examination I found no sarcinæ or Opler-Boas bacilli and diagnosed the case as one of nervous dyspepsia. I treated her for thirty days, but with no results; the vomiting continued and she re-

fused to leave her bed. The family were simple hearted people with strong Christian faith. The thought struck me to try treatment along the point of their faith.

At my next visit, I walked rapidly to the bed without removing my outer coat and said to the patient: "Laura, I have had a vision that you are going to be well and out of bed in ten days. I want you to ask God to bless all the means that I shall use." And she said she would. I said to her husband: "Irving, will you meet the conditions?" And he said he would. I said to her mother: "Will you do likewise?" And she replied in the affirmative. In ten days she arose from the bed healed. No doubt if I had been as sure on the point of faith as my friends were, she could have been healed instantly.

Finally, when we are disarmed from a physical point of view, let us remember that in our role as physicians, we have a powerful support, which our sympathy for the patient gives us, our constant altruism, and I do not hesitate to say these are the more efficacious.

Smallpox in Michigan.

During the four months, from November 1, 1907, to March 1, 1908, nine hundred and fifty cases of smallpox have been reported to the State Department of Health. More or less epidemic in character everywhere throughout the state, the spread of the disease has reached striking proportions in sixteen localities, that is, three cities, one village and twelve townships. Indeed, in many instances drastic measures were necessarily tardily taken to prevent the threatened quarantine of the entire jurisdiction. The chief cause of these epidemics is that the people are not protected by vaccination and re-vaccination. In addition, common mistaken diagnosis on the part of the medical profession, wilful opposition on the part of many

persons to observe the necessary preventive measures and lax enforcement of the law by health authorities, have combined for the wide prevalence of the mild form of smallpox. An occasional death occurs from this light form of the disease. It is everywhere a nuisance, to say the best of it. It is costly. It is preventable. The means to prevent it are absolutely known; they are known to the general public. The prevalence of smallpox in Michigan today speaks for the mistaken judgment on the part of many medical practitioners; it speaks for the indifferent and shortsighted, false economy of the local health authorities; it speaks for the carelessness of the general public.—*Public Health*.

THE CURATIVE VERSUS THE PALLIATIVE TREATMENT OF HERNIA*

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Because of their bearing on the subject in hand, I wish first to narrate briefly the following four cases, that came in my practice during July, August and September, 1907. They are not presented as showing permanent results since they are of too recent occurrence to be considered absolute. They are illustrative cases or object lessons merely.

The first represents typical conditions in boys whose herniae have not been cured in early childhood. When operated upon, as that boy was, before strangulation occurs or dense adhesions form, operation is easy and recovery usually prompt. The second case resembled the first with the exception of strangulation. He was fortunate in having come to operation within the first twenty-four hours. The third and fourth cases belong to that large group, for which the profession is largely responsible, who bear their deformity until driven to operation to escape pain and death. They are fortunate then to get away even without a radical cure. Their history charts read as follows:

Case I. C. E. A., a boy of 14, is the third member of the family to have trouble of this nature. His father had a left-sided rupture from childhood. An only brother also had a hernia on the left side, which was operated upon to secure relief. Our patient had a left inguinal hernia from birth. It was the source of constant annoyance and discomfort. It made the patient irritable and at times caused severe pain. During the preceding seven or eight months the control of the

hernia by a truss had been unusually difficult. The boy was more nervous than ever and so constipated as to require a cathartic daily. Profiting by the relief obtained by the other son the mother decided to have this one operated upon also. The Bassini operation was done July 10, 1907. Recovery was uneventful. The boy was taken home on the thirteenth day.

Case 2. A. O., a youth of 17, a machinist, was brought to St. Mary's Hospital August 17, 1907. He had a congenital right inguinal hernia, but had never worn a truss. About noon, the day before, the patient was seized with severe griping pains, which caused him to double up in agony. He vomited several times and the retching "seemed to almost tear him to pieces" in the region of the hernia. Reduction of the hernia was attempted that afternoon and again on the following morning, but without success. When brought to the operating table inspection showed a globular enlargement of the right side of the scrotum about the size of two doubled fists and a small sausage-shaped mass extending along the course of the right inguinal canal. A straight oblique incision was made along the course of the canal and extending to the base of the scrotum. On opening the sac the gut was found to be reddened and congested but was returned into the abdomen. The sac was ligated and resected as usual and the internal oblique and transversalis muscles were sutured to Poupart's ligament. The wound healed at once. The patient was out of bed on the seventh day and left the hospital two days later.

Case 3. Mrs. L. R., 39 years of age, came under my care complaining of pain all over the abdomen. Her temperature was 99.6 F.; pulse 80; respirations 20. In the right groin just above Poupart's ligament and directly over the region of the external ring there was a tense swelling about the size of a small hen's egg. It was somewhat movable but coughing produced no im-

*Read before the Lapeer County Medical Society, January 8, 1908.

pulse. Percussion showed flatness. Inquiry elicited the following history: Succeeding a confinement fourteen years before, a small tumefaction about the size of a pigeon's egg appeared in the right groin. It caused her no inconvenience as a rule, but at times, after having been on her feet a great deal, the tumor would increase slightly in size. Manipulation and the recumbent posture always caused the mass to disappear. Two days before entering the hospital, she was seized with severe cramping abdominal pains. At this time she noticed that the tumor was larger than usual, tender and irreducible. Her bowels, which had moved regularly every day, became now obstinately constipated. In the hospital a simple enema was given and followed by vomiting of a quantity of dark brown fluid. Strangulated hernia was diagnosed and operation advised. A radical cure was attempted July 22, 1907. The usual incision was made and carried down to the sac, upon opening which a quantity of dark bloody fluid ran out. A loop of small intestine about three inches in length emerged from and re-entered the ring. It was black and dead-looking and at one point there was an ulcerated hole in it the size of a ten cent piece. After carefully enlarging the ring and getting hold of healthy gut at each end, about six inches of the intestine were resected and an end to end anastomosis performed by means of the Connell suture. The abdominal muscles were sutured with catgut and the wound closed without drainage. Three days after the operation an obscure febrile rise occurred but the wound showed no signs of sepsis and the patient expressed herself as feeling good. The bowels moved well. The temperature continued from 100° F. to 103° F., during the succeeding four days, the patient became somewhat delirious, and the skin of the thigh below the incision began to look red and indurated. The lips of the wound were parted, when about a drachm of thin sero-purulent exudate oozed out. A small gauze drain was inserted but the fever persisted still. Two days later a faint urinary odor was detected on the dressings. Next day considerable urine was found to be escaping. A self-retaining catheter was passed through the urethra and left in situ, the head of the bed elevated in order, if possible, to direct the flow of urine away from the abdominal opening of the bladder, and rubber drainage provided both above and below through the operation wound. At first the urine per urethra was scanty and contained large quantities of albumin. The bowels moved normally. In

ten days the urinary fistula closed, after which the wound healed rapidly. August 17, the albuminuria had entirely disappeared. August 29, 1907, recovery had become complete and the patient was discharged cured.

Case 4. E. B., a carpenter, 40 years of age, entered St. Mary's Hospital with a pyriform tumor of the left side of the scrotum, eleven inches in length by five inches in its broadest diameter. The base of the tumor tapered toward the external abdominal ring, from which could be traced a swelling extending through the inguinal canal. On palpation the tumor was smooth and tense at the base, but more fluctuating at the apex below. There was no impulse on coughing nor translucency. The temperature was 101° F., and pulse 92. There was no pain at the time but there was a history of vomiting once or twice daily for about a week. The left side of the scrotum had been as large as an apple as long as he could remember. It had a fatty feel and increased in size whenever he coughed or strained. At times the tumor became large by an influx from above, but he had been able always to push this back into the abdomen. One week previous to entering the hospital, while loading a wagon, he was struck in the abdomen by the tailboard. He resumed his work but after getting home that night suffered considerable pain. The next morning he noticed that the scrotum was enormously enlarged. Taxis failed to reduce it. After several days' delay he was brought to the hospital. All food and drink were interdicted and vomiting ceased. Operation was done September 25, 1907. An oblique incision five inches long was made in the skin over the course of the inguinal canal and extended down on to the base of the tumor. The overlying tunics were carefully dissected out and entered. Upon incising the sac, a fecal odor was noted and a purulent exudate was uncovered. Extreme care in making the dissection was necessary because of the congested and friable condition of the tissues which entirely effaced the usual landmarks. A pyogenic membrane about one-sixteenth of an inch thick and of a dirty green color covered the lower and left lateral aspects of the mass and lost itself in the abdominal cavity. The greatest part of the tumor was found to consist of a liver-like substance, which proved to be made up entirely of omentum. A small loop of jejunum-ileum emerged from the external ring and entered again immediately. The scrotal section of the gut was gangrenous and almost entirely separated from the abdominal

portion, leaving a hole from which liquid feces continually escaped. The mass of omentum was ligated piecemeal, the spermatic cord being held aside meanwhile. When removed, the omental lump was about the size of a croquet-ball. The hole in the friable intestinal wall was as large as a silver dollar and was closed by means of the last third of the Connell anastomotic suture, followed by a superimposed layer of Lembert sutures. The apical swelling proved to be the testicle surrounded by a small hydrocele. The latter was emptied and its surface scarified. Because of the sepsis present, closure of the hernial opening was not attempted, and instead large rubber tubes were placed deep in the abdominal and scrotal portions of the wound. A strip of iodoform gauze was also packed around the abdominal drain and a few basting sutures inserted. Reaction was excellent. A fecal fistula developed on the fourth day and discharged feces for six days. The wound healed by granulation steadily and the patient was discharged cured November 7, 1907.

The management of hernia has undergone marked changes in the last twenty years. Previous to this short period cure was the exception instead of the rule. It has been estimated that radical cures were obtained in not more than forty-five per cent of the cases operated upon by the methods in vogue. Furthermore when the operation was not successful the patient was often worse off than before. Under such circumstances it was to have been expected that desperate cases only came to operation, the large remainder being treated by mechanical means or not at all.

How large the latter class is can hardly be appreciated. It has been conservatively estimated that fully three-quarters of a million trusses are made in this country yearly.* One maker alone claims to manufacture this number but his trade is partly export. When it is realized that to one truss wearer there are two or three others who should but do not constantly wear them, we obtain some idea of the size of this vast army

of deformed men, women, and children.

But figures alone do not tell the whole story. The wearer of a truss is a chronic invalid and as such his or her capacity for performing the full duties of life is affected. A man's producing capacity is thereby reduced from five per cent to fifty per cent, depending upon the variety and extent of the hernia from which he suffers. The loss to the State from this source is so great that from a financial viewpoint the state could well afford to provide the means and expense of every such patient's cure.

To the patient the cost is still more. Except in infancy and early childhood trusses seldom effect a cure. Their presence is a constant annoyance; the pressure irritating; many trusses are made wrong while others are fitted improperly; all are uncertain in effect and unreliable in their control of the hernia under all circumstances of life. All herniae tend to grow larger under strain and as age advances. Sooner or later strangulation is imminent and life is in grave danger.

In 1888, Bassini, of Padua, presented to the Italian Surgical Society a method of operation, which has revolutionized the treatment of hernia. In 1889, Halsted, of Baltimore, and in 1900, Ferguson, of Chicago, each published somewhat different procedures, based however on the essential principles of the earlier operation. These methods are all comparatively simple, easy to adopt in selected cases, and, if done aseptically, safe and curative in the hands of experienced surgeons.

From researches made by Russell, of Melbourne, there has been developed the so-called sacular theory of the origin of hernia. It is held by Russell and is being accepted by some good authorities already that the sacs of nearly all herniae are preformed even though the herniae do not appear until adult life. If

*De Garmo Abdominal Hernia.

a hernia occurs it is presumed that the sac had been formed congenitally and the exciting cause effected the presenting of the hernial contents. These observations seem reasonable and afford a scientific basis for the following facts: It is indubitably accepted as a principle of surgery that even though the intestine and omentum or other viscus be replaced into the abdominal cavity the hernia can not be cured without complete removal of the sac. From this it naturally follows that, except in young children, the use of trusses, injections, or other means short of removal of the sac is improper treatment. They are palliative merely.

If operative treatment be advised, proofs of good results should be forthcoming. The following among others have been submitted:

In September, 1907, Bull and Coley of New York, published a report of 2,032 operations for the cure of hernia, performed during the seven years previous. Of this number 1,978 were cases of inguinal and femoral hernia, in which there was a mortality of five patients, or one-fourth per cent. In 24 cases the operation was for strangulated hernia. Of these but one died—a very stout woman with a strangulated umbilical hernia. In 1,185 cases operated upon by the Bassini method, there were six relapses or 0.5 per cent.

In his recently published treatise on Abdominal Hernia, DeGarmo, of New York, has reported 43 operations for strangulated hernia with 9 deaths, and 1,257 operations for cure of hernia with 8 deaths, or 0.63%. There were 19 recurrences, in which 9 were re-operated upon, leaving a balance of 10 relapses.

In *Progressive Medicine* for June, 1907, there are quoted the results of about 2,000 operations upon 1,188 individuals by Brenner in Linz (Austria). Including the incarcerated cases there were 11 deaths in 1,188 persons operated upon,

or 0.9 per cent. In the non-strangulated cases there were 5 deaths, a mortality of 0.4 per cent. In 1073 radical operations there were .988 (92 per cent.) permanent cures.

In 300 operations for hernia reported by Pfister, of which 105 or 35 per cent were for large, irreducible hernia, there was no mortality.

The results obtained usually in incarcerated and gangrenous herniae in spite of aseptic and antiseptic precautions, are far from encouraging. They constitute the strongest argument for prompt measures in strangulated hernia and for radical cure.

Lessing has reported 156 operations for incarcerated hernia at Konig's (Berlin) clinic, with a mortality of 27, 17.3 per cent. The death rate of the non-gangrenous cases was 14, 11 per cent. The mortality in the gangrenous cases was 37.1 per cent. (13 out of 35).

Other statistics for gangrenous cases range from 42.5 per cent to 64 per cent.

Given such reports showing the high mortality of incarcerated and gangrenous hernia, and in contrast the low mortality and infrequent relapse of the non-strangulated cases, and realizing the inconvenience, discomfort and danger of truss wearing, we can conscientiously and honestly advise many patients to accept the radical cure of their hernia, assuring them that they are safer with the operation than without it. Under ideal conditions strangulated hernia would never occur except when hernia and strangulation occurred simultaneously or in those cases in which operation had been contraindicated. We recognize the gravity of a diseased appendix and advise the interval operation to forestall a more serious complication. Why, then, should we not refuse to bear longer the responsibility of a threatening uncured hernia?

The indications and contraindications respecting hernial operations may be

stated definitely as follows:

Infants and children up to the age of four or five years are usually curable by proper mechanical treatment. For them operation is seldom needed except the hernia become strangulated or be complicated with irreducible hydrocele or adherent omentum.

For children above five years, and adults having hernia, but otherwise in good health, radical cure is indicated.

Serious organic diseases of the heart, lungs or kidneys, advanced age and large, adherent, irreducible hernia in stout subjects, especially when the sac contains both intestine and omentum, are contraindications to any except emergency measures. In such cases the risk overweighs the probability of permanent cure.

It is unnecessary at this time to describe in detail the technique of operative treatment of the several varieties of hernia. The inguinal form constitutes about 73%, or nearly three-fourths of all hernia. It has been the pivot therefore on which has turned the cure of the other kinds. The same principles underlie the successful treatment of all. They are first, the thorough exposure of the canal, ring and its muscular pillars. Second, the ligation and excision of the sac flush with the parietal peritoneum so that any funicular pouch shall be obliterated. Third, the accurate approximation or overlapping of the muscular structures closing and covering the ring.

Persistent, remittent fever after an acute infection of the knee joint is usually due to a systemic invasion. Such cases are best treated by laying the joint wide open (Mayo operation).—*American Journal of Surgery*.

A large, slowly healing superficial ulcer of the leg may be due to a thrombosis of one of the small vessels leading to that part. Of course, syphilitic etiology must first be ruled out.—*American Journal of Surgery*.

In inguinal herniotomy the external oblique should be opened up from the external ring along the canal as high as the internal ring. The internal oblique and transversalis muscles should be sutured to the lower shelf of Poupart's ligament. In the Bassini operation the cord is transplanted to a new canal between the external and internal oblique muscles. Halsted urged removing all but one or two veins of the cord and placing the cord between the skin and external oblique muscle. Ferguson would leave the cord untouched but suture the lower two muscles to Poupart's ligament over the cord. The Bassini operation is most generally employed and has been found satisfactory. However transplantation of the cord is not considered essential to radical cure and many surgeons have come to regard non-interference with the cord as a mark of superiority.

In femoral herniae, which constitute about 18% of all forms, the hernial ring may be closed by a purse string suture after ligation and excision of the sac.

In the umbilical variety, composing about 8½% of all herniae, omentum, if contained in the sac, should be ligated and removed, the sac should be ligated and excised as usual, and the muscular structures overlapped so as to present a firm barrier.

The remaining 1% may be treated according to the same general principles.

In cases of suspected fracture of the skull, percussion-auscultation will be found a valuable procedure where all the other signs and symptoms have been negative. The procedure is the following: The forehead is repeatedly tapped sharply in the median line with the middle finger, the stethoscope being moved from one point to another from before backward. If a fracture be present, a cracked-pot sound is elicited just beyond it. The corresponding part of the head on the other side should be auscultated to eliminate possible error.—*American Journal of Surgery*.

HISTORICAL SKETCH OF THE DECEASED FOUNDERS OF THE DETROIT ACADEMY OF MEDICINE*

LEARTUS CONNOR, A. M., M. D.,

Detroit.

On September 21, 1869, our founders with their friends, organized the Detroit Academy of Medicine. Their names were: George P. Andrews, J. M. Bigelow, Caleb B. Gilbert, Richard Inglis, Edward W. Jenks, Henry F. Lyster, James F. Noyes and N. W. Webber. Intimately associated with these as founders of the Academy were five men still living: W. H. Lathrop, of Lowell, Mass.; S. P. Duffield, of Dearborn, Mich.; Theo. A. McGraw, Albert B. Lyons and Henry A. Cleland, of Detroit.

Their nationality: The eight founders were born in eight different countries or states: Andrews in the Sandwich Islands, Bigelow in Vermont, Gilbert in Canada, Inglis in Scotland, Jenks in New York, Lyster in Ireland, Noyes in Rhode Island, Webber in Maine; thus the Puritan stock predominated, reinforced by fresh Irish, Scotch and Canadian—surely if blood counts, our founders stood at the top.

Their general education: Only Lyster possessed an A. B. degree; the rest obtained a school education equivalent to that needed for entering college. To this some had added the discipline gained by teaching school; others had worked as clerks in stores, general or drug; some had that peculiar university education obtained only by growing on a farm with intelligent parents; several were natural book-worms; for practical purposes they were well educated.

Their medical education: Our found-

ers gained their medical training—from private preceptors; medical colleges; post-graduate work; hospital service; or study with European teachers. As they were born in eight different states, so they received their doctor of medicine degrees from eight different colleges: Andrews from the College of Physicians and Surgeons, New York; Gilbert from the medical department, University of New York City; Bigelow from Medical College of Ohio; Jenks, Castleton Medical College, Castleton, Vt.; Inglis, Western Reserve Medical College, Cleveland, O.; Lyster, medical department, Michigan University; Noyes, Jefferson Medical College, Philadelphia, Pa., and Webber, Chicago Medical College. Thus they brought to the founding of this Academy the best equipment of eight leading medical colleges, the precepts and lives of at least a hundred of the most celebrated physicians and surgeons of their time.

The age of the founders of the Academy: All were young men, Dr. Inglis alone settling in Detroit before the civil war. Near the same time, these young men began their struggle for position and practice in a large field which had been neglected through the exigencies of the war. Jenks, Noyes, Gilbert, Bigelow, had won success in smaller fields; Lyster and Webber had served in the civil war; Andrews in a government hospital; thus, while all were young men, none were novices—all had won some success and all suffered some defeats—they were thus ready for the best work of their lives.

*Read before the Detroit Academy of Medicine, Feb. 25, 1908, on the occasion of its Fortieth Anniversary.

To grasp the significance of the founding of the Detroit Academy of Medicine, it is necessary to briefly recall the events preceding September 21, 1869, and the conditions then existing. In 1850 the medical department of the University of Michigan was founded; in 1852 to promote its interests, the *Peninsular Medical Journal* was started; in 1855 the Outs started the *Medical Independent*; in 1857 financial and other forces compelled a truce to the conflict between the Ins and Outs. During this period most earnest efforts were made to remove the medical department to Detroit—as they called “a spade a spade” in those days, the copy furnished medical journals was highly seasoned. During this contest, the Detroit Medical Society and the Michigan State Medical Society suffered greatly in influence, until, with the near approach of the civil war, both went into hibernation.

At the close of the war, medical societies and journals had to be started, and the growing clinical resources of Detroit utilized. At least one of our founders, while studying in Bellevue Hospital, had familiarized himself with the situation in Detroit, determined to make that city his future home, and discussed the founding of a medical college there with the late Austin Flint. On reaching Detroit he made the acquaintance of other of our founders, broached his ideas to them, and together they planned for the future. The wives of some of these founders used to tell of protracted meetings they held while whittling and sitting on a Shelby street fence during the long summer evenings of this period. Possibly these meetings were responsible for the issue to the medical public in April, 1866, of the “*Detroit Review of Medicine and Pharmacy*,” edited and published by E. W. Jenks, George P. Andrews, Theodore A. McGraw and S. P. Duffield. On the following May 3 the same parties were active in forming the third epoch

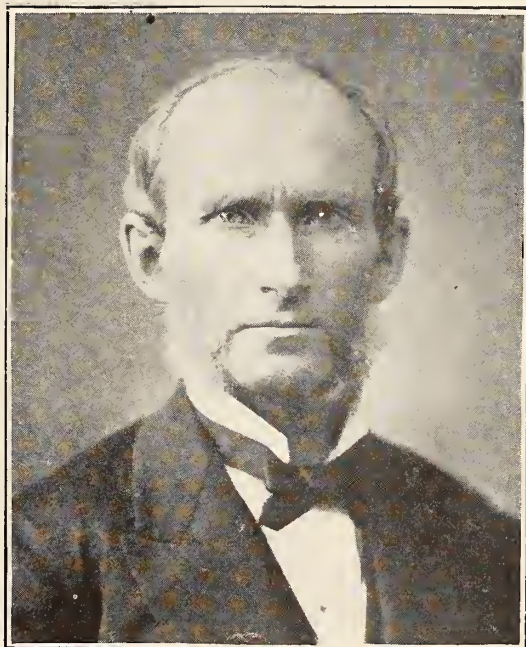
of the Wayne County Medical Society. On the following June 5 the same parties and their friends were active in organizing the third epoch of the Michigan State Medical Society. Note that during the months of April, May and June, 1866, a medical journal, a local County Medical Society, and a State Society were launched—all engineered by our founders and their friends. The *Journal* (under different names) continued its work twenty-eight years, and the county and state societies, with evolutions to meet changed conditions, have grown to their present magnificent proportions and influence.

These steps were but preliminary to far more extensive plans. In a brief period our founders and their friends had secured control of all the hospitals in Detroit; a number of business men of the highest social standing were influenced to finance a new medical college and act as its trustees. This college was organized in 1868, manned by our founders and their friends, and named the Detroit Medical College.

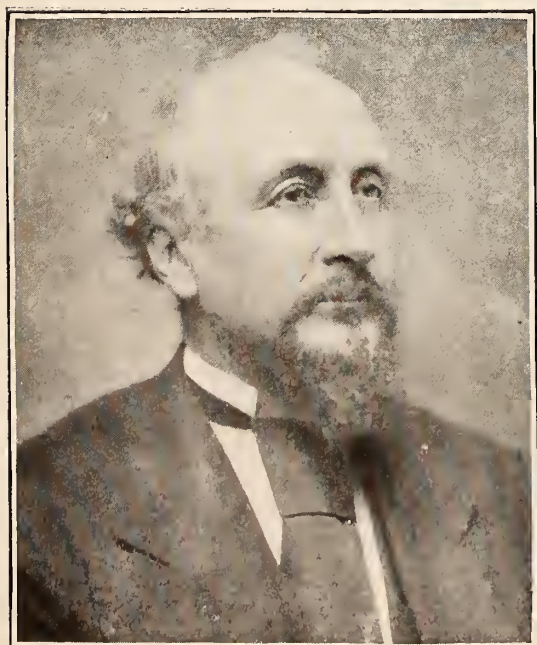
It was soon realized that medical teaching was an art new to our founders, to aid them in acquiring which they organized the Detroit Academy of Medicine. This brought all the teachers into closer fellowship with each other and their friends; it cultivated their powers of public speech and familiarized them with each other's stock of knowledge; it placed their best work, through their medical journal, before the physicians of Michigan and adjacent states; it furnished a rallying ground as against the “outs” they had created by their capture of the hospitals, and superior advertising facilities. For its purpose it did not want “outs,” and so provided a “Club Medical Society.” From the beginning it was a success, and has continued such. Its relations to Detroit Medical College long since ceased; those congenial to existing members were welcomed, irrespective of their associations



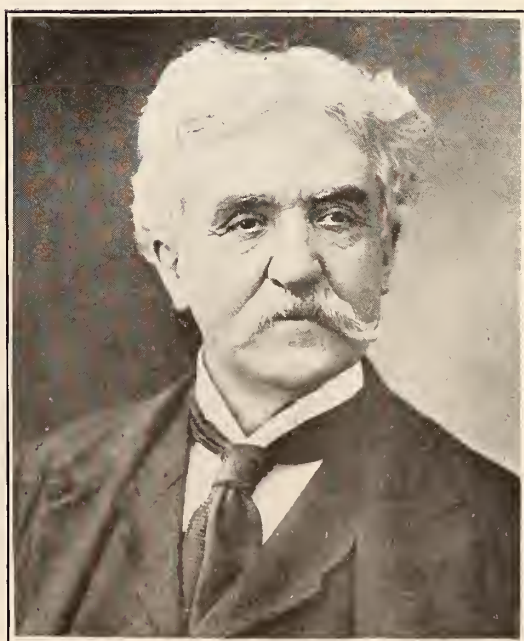
George Pierce Andrews



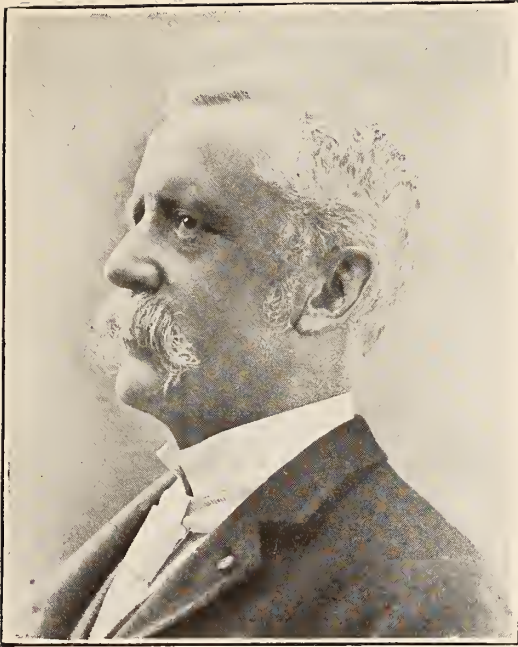
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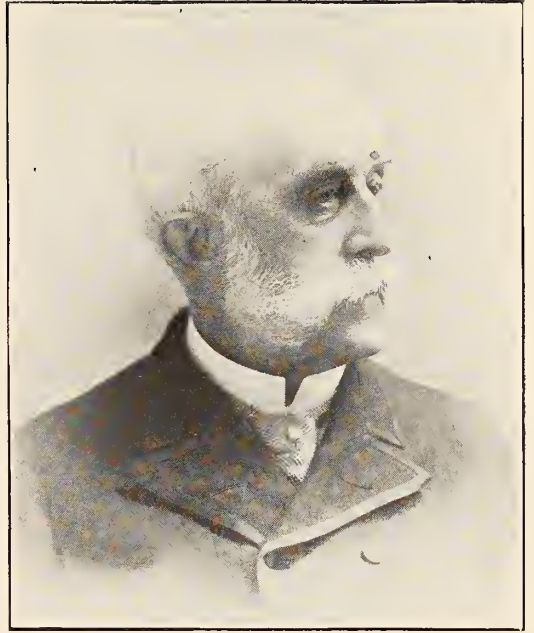
Richard Juglis



Edward M. Jenks



Henry F. Lyster



James Faunting Noyes



Nathaniel W. Webber

—the aim being to furnish a chance for a small number of educated medical gentlemen to fellowship more closely than is possible in a larger body; to aid the neophyte to learn to think on his feet; to augment the esteem in which the profession of Detroit is held.

The founders as medical teachers: Except Lyster, all of the founders were teachers in Detroit Medical College; Dr. Jenks was teacher in the Medical Department Bowdoin College, Me., and later in the Chicago Medical College; Lyster was teacher of surgery and medicine in the Medical Department University of Michigan, and later teacher in the Michigan College of Medicine.

The founders as hospital physicians: Andrews was on the staff of St. Mary's, Harper's, Woman's and Children's; Jenks was on the staff of St. Mary's, Harper's and Woman's, and Mercy Hospital in Chicago; Noyes on St. Mary's, Harper's and Woman's; Gilbert on St. Mary's; Inglis on Harper's and St. Mary's; Bigelow on the Marine Hospital; Lyster on St. Luke's. All the teachers of practical medicine and surgery had out-patient clinics, so that students and physicians were brought very close to the examination and treatment of all sorts of disease. Our founders were among the first to emphasize practical clinical teaching.

Our founders encouraged, so far as practicable, the evolution of practice into special fields, believing that thus the greatest advantage would come to all, by the transformation of more of the unknown into the known. Very early they equipped histological, physiological and pharmaceutical laboratories, in addition to the chemical and anatomical, that the student might confirm or refute the statements of his teachers or text-books and come into contact with nature's things and forces. Our founders were active in lengthening the time of study, in arranging the several departments in separate courses instead

of taking all the courses at the same time; in adding recitations to lectures; in introducing the Socratic method, to the entire system of teaching.

Our founders as members of Medical Societies—They did not limit themselves to the Detroit Academy of Medicine, but took an active part in all societies within their reach, so promoting their evolution to their present high standard. Those living in Detroit at the time were founders of the Wayne County Medical Society; the Detroit Medical and Library Association, and the Michigan State Medical Society. Of the others Andrews was a founder of the Detroit Obstetric and Gynecological Society and member of the American Medical Association; secretary of the Michigan State Medical Society in 1866; president of the Detroit Academy of Medicine in 1876.

Bigelow was a founder of the Ohio Medical Society and a member of the Michigan State Medical Society.

Gilbert was president of the Detroit Academy of Medicine in 1875; president of the Detroit Obstetrical and Gynecological Society in 1887; and member of the American Medical Association.

Inglis was president of the Detroit Academy of Medicine, 1869-70; president of the Michigan State Medical Society 1869; vice-president in 1868; president of the Detroit Medical Society (No. 1) 1854-55; vice-president of the Wayne County Medical Society 1850; member of the American Medical Association.

Jenks was vice-president of the Detroit Academy of Medicine 1869; president 1873; president of the Detroit Obstetrical and Gynecological Society 1888; president of the Michigan State Medical Society 1873; president of the Detroit Quarter Century Medical Club 1898; chairman section of obstetrics, American Medical Association 1878; founder American Gynecological Society; member Illinois State Medical Society; mem-

ber Chicago Medical Society; honorary member of the Cincinnati Obstetrical Society; honorary member London Obstetrical Society; member American Association for the Advancement of Science.

Lyster was treasurer of the Detroit Academy of Medicine 1869, and president in 1871; director of the Wayne County Medical Society for five years; member of the American Medical Association; corresponding member Boston Gynecological Society; member National Society Railway Surgeons; member National Association Medical Directors of Life Insurance Companies; member Military Order Loyal Legion of U. S.; for many years member of the Michigan State Board of Health.

Noyes was president of the Detroit Academy of Medicine 1872-73; a founder of the American Ophthalmological Society; member of the American Otological Society; member American Medical Association; honorary member of the Texas State Medical Society; member Maine State Medical Society; member Rhode Island State Medical Society.

Webber was a member of the Michigan State Medical Society and of the American Medical Association.

All our founders were Republicans.

As to their formal religious creed: Andrews was a Congregationalist; Bigelow a Catholic; Gilbert and Webber Methodists; Jenks and Inglis Presbyterians; Lyster an Episcopalian, and Noyes a Unitarian—but all were tolerant of the views of each and content to let the world worship God by its own methods if only good citizenship was promoted thereby.

Founders' Personal Characteristics—It were not unfair to estimate the deceased by the living, some of which are with us tonight, and all but one are well known. I may be permitted to direct attention to the business turnouts of the founders. Bigelow and Webber did their business on foot; Andrews and

Lyster's carriages resembled the one-horse rigs of a seedy country parson; carriage none too good, harness illy kept; horse lacked proper grooming—all exhibiting a lack of personal interest in their teams. This was the more noticeable because their dress and manners were those of perfect gentlemen.

Gilbert rarely used a carriage, but when he did it was a ladies' phaeton, always trim, neat and clean, like himself.

Inglis drove a single buggy, perfectly equipped for the exacting demands made upon it, relays of horses being provided.

Noyes dashed through the streets in a careless manner in an old-fashioned doctor's chaise, provided with hickory springs, drawn by a moderate sized white horse. At a later period he drove a spirited bay team before a Johnson's covered buggy, but his reckless driving caused him divers troubles.

Jenks in his prime had a stunning turn-out; a team of spanking bays before a Portland buggy, driven by a stylish coachman, all resplendent with the most perfect care—showing that he loved a good horse, perfectly groomed and well fed, but not overworked.

Our Founders' Family Life—All but Noyes were married, one or more times; five were survived by their wives; the seven by twenty-three children; four left sons practicing medicine, viz.: Lyster, Jenks, Inglis and Webber. The homes of the founders were each, in its peculiar way, models—the nurseries of good citizens. While Noyes was a bachelor, he was a founder of the Oak Grove Asylum at Flint, and personally erected a building suitable for the amusements of the inmates, so increasing the value of their treatment; for years he supported one or more needy youth while qualifying themselves to earn an independent living; he also endowed a bed in Rhode Island Hospital for perpetual occupancy by some sick, poverty-stricken person.

Our Founders' Financial Rewards—

None was rated a millionaire; none died in a poor-house. Eliminating property inherited, married, or from investments, having an unusual rise in value, it may be doubted whether these rewards were much in excess of a good living for the doctor and his family; a good education for his children, and a modest balance for the inevitable rainy day.

As to the Causes of Our Founders' Deaths—Andrews died from an obscure nervous affection; Bigelow from apoplexy; Gilbert and Webber from cancer of the stomach; Inglis from infection; Jenks from pneumonia; Lyster, pernicious anæmia, and Noyes from heart failure; the youngest at death was Dr. Inglis; the oldest Noyes, aged 51 and 79 respectively.

Finally—Our founders were *men*, bred from the world's best stock; well educated for their time; inspired by high political, moral and religious standards; moved by lofty ideals for the betterment of their profession and country; ambitious for highest achievement. They built true homes and left families to perpetuate their names and influence—never permitting a breath of scandal to touch them or theirs.

Our founders were *physicians*, trained by the best teachers of their age, and earned the reputation of competent, honorable practitioners, trusted alike by their fellow doctors and the laity.

Our founders were *teachers*; the waste clinical material in Detroit they arranged so as best to serve both undergraduates and practitioners; they adopted and encouraged others to adopt rational methods of teaching; in this academy they were teachers and in other city and state societies; through their Medical Journal they were teachers to an ever widening audience.

Our founders were *leaders*; entering the vacant field after the civil war, while others attended to their individual business, our founders gathered up the neglected material and builded a series of medical societies, a journal, and the Detroit Medical College—they led the way to a communal life.

Our founders were *producers*; they wrote papers of temporary interest and more or less permanent value; they engaged in discussions that clarified thought; sorted true from false observations—so laying a solid basis for successful practice.

Unconsciously their methods and spirit fell upon new fellows, theirs on others, and others, forming a network of related human activities impossible to trace.

Outside the technique of medicine and surgery, the spirit and lives of our founders were important factors in promoting the upbuilding of Detroit, Michigan, and our fatherland.

BRIEF SUMMARY REGARDING THE BATH TREATMENT AT MT. CLEMENS IN REFERENCE TO NERVOUS PATIENTS.

RICHARD LEUSCHNER, M. D.

Mt. Clemens.

According to my observations there are approximately two groups of nervous patients that come to Mt. Clemens for rest and bath treatment. In the first

we meet the overworked business and professional man, the careworn housewife and mother, the society woman and those battling with menopause. In the

second group we encounter those suffering from tedious convalescence incident to the consequent exhaustion from prolonged illness.

The effects of the baths experienced on the different patients were quite varied and interesting, and, after mature deliberation I could establish the following principles:

(a) That all of the nervous patients tolerate the baths and feel comfortable only at temperatures ranging from 89° to 96° F.

(b) Patients experienced a decided chilly sensation, even more so than those suffering from rheumatism, when the temperature sank below 89° F.

(c) At temperatures exceeding 89° F. and higher, patients would manifest a pronounced excitation of the nervous system, followed not infrequently by a greater and prolonged exhaustion.

(d) Patients suffering from tedious convalescence with nervous exhaustion, where local structural changes, accumulation of cells in the neuroglia, etc., are apparent, such as we observe in most all metabolic disturbances, obtained the best results when baths were administered not longer than ten minutes, coupled with a very gentle or no manipulation in the mineral water whatsoever. In such cases the shorter bath with its consequent milder stimulation of the cutaneous nerves and lesser absorption of the minerals into the system was advisable, because the longer bath of twenty minutes and its prolonged excitation to the skin and increased absorption of the bath water would have had a more decided action and effect

upon the lymph movement and the circulation of the blood resulting in forced pressure upon the diseased areas of the body. Therefore only the ten-minute bath extending its milder stimulus could be used without any discomfort to bring about the absorption of infiltrations in the nerve connective tissue, etc.

(e) Patients belonging to the first group and presenting as a rule a very poor conductivity of the nerve currents and channels, would receive the most beneficial effect from the bath of somewhat longer duration, perhaps from 15 to 20 minutes, aided by an ample and not too forceful massage, at a temperature of the water, however, wherein the bather would manifest at the inception of the bath a decided feeling of bodily comfort. That body comfort would generally begin to prevail at 89° F., ranging to 96°, according to the susceptibility and condition of the patient's organism, but never was it necessary to go higher. In this prolonged bath generally the temperature had to be kept uniform by the gradual addition of warmer water.

As a rule, individual treatment was indicated with the nervous patient more so than the rheumatics, and by the careful gauging of the temperature of the bath in every single instance the results obtained proved entirely satisfactory, showing, according to the observations gathered, that baths between 89° and 96° are most essentially correct, and consequently avoiding in this way too strong a deviation in the blood pressure, lymph movement and excitation of the nerve courses.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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JUNE

Editorial

Metchnikoff's theory of the cause of old age, recently set forth, has created much interest and not a little ridicule. The Germans have taken it as a sign that the grand old man is approaching his anecdotage, but it is to be suspected that he is no fanatic vainly seeking for the spring of perpetual youth; rather, that he has an idea which he is quietly testing upon himself, as he sits in his laboratory, with a bowl of *yoghurt* on the bench beside him.

Now *yoghurt* is a curdled, sour milk, made by adding to fresh milk a ferment called *maya*, and is much used, as an article of diet, by the inhabitants of Bulgaria. While traveling in that country, in company with Professor Duclaux, formerly director of the Pasteur Institute, Metchnikoff became impressed with the very large proportion of old men, strong, well-preserved, and active, whom they met. It has long been known that the Bulgarians are a particularly long-lived people. Indeed, reliable statistics show that out of a population of some two and one-half millions, there are about three thousand centenarians, a number of whom, on good authority, are from one hundred and ten to one hundred and twenty years of age. Why these people are thus favored has not been known.

Metchnikoff, however, analyzed the

facts and found that there is nothing unusual in the country and nothing uncommon in the habits, customs, or manner of living of the people, with the single exception that this *yoghurt* forms a staple of diet, second only to the staff of life. It is in daily use by young and old. He investigated the ferment used, *maya*, and found that it consists of various strains of lactic acid bacilli, chief of which is a large organism called "bacillus of Messol," from the Swiss bacteriologist first identifying it. When added to fresh milk, this bacillus forms an unusually large amount of lactic acid, but when acting alone, it also breaks down the fat and gives to the milk a rancid taste. However, when used in conjunction with other strains of lactic acid bacilli, as in *maya*, this fat-destroying property is inhibited, so that the resulting sour milk is not unpleasant to the taste.

This bacillus has another characteristic in which it is different from other bacilli of the lactic acid group. It is very resistant and can travel throughout the intestine, without suffering harm. It can be recovered readily in cultures made from the excreta.

Now Metchnikoff, if we understand him aright, looks upon old age as a chronic disease, and the changes incident to it, as analogous to those which take place in chronic infections and intoxications. The infection or intoxication is from the absorption of ptomaines and other poisons produced in the intestine by the putrefactive bacteria. The irritation caused by these elaborated poisons results in a proliferation of connective tissue and a destruction of the parenchyma of all the organs, bone, muscle, arteries, brain, liver, kidney, ending with atrophy and degeneration. As Thompson, in his delightful "*Glimpses of Medical Europe*," puts it, "the flora of the gastro-intestinal tract are trying to hand the arteries a lemon." And we use the term "lemon" advisedly, for the body

may be compared to that much maligned fruit, which consists of pulp and juice. When we are young we are "full of juice." Old age is the replacement of juice by fiber. Just as a fruit goes "woody," so in old age the parenchyma of the liver, kidneys, and other organs is replaced by fibrous stroma. "Why not," says Metchnikoff, "combat these organisms by introducing bacteria of an opposite sort?"

That's the point. Fight the putrefactive bacteria in the intestine and put the Angel of Death to rout! That is the theory in a nutshell.

The *Bacillus* of Messol is the warrior selected to make this fight, for he decomposes the starches and sugars and hurls the lactic and succinic acid thus formed at the defenseless aborigines of the colon, until they succumb and cry "Long live the host!"

The theory is, at least, an ingenious one and is now being given a trial in France, where tablets of *bacillus* Messol and associates are being prepared and sold under the name of "ferment-lactyl."



There is nothing especially novel in the idea that buttermilk as an article of diet possesses certain peculiar virtues. In the field of pediatrics especially its use in certain parts of the world is known to date back some centuries—not merely as a substitute for breast milk for the healthy child, but also as a therapeutic agent in the treatment of certain intestinal disorders. As early as 1768, for instance, we find it mentioned in Basle as a preventive of dysentery. In its natural form, as a by-product in butter-making, it seems to have been widely used by the laity as an infant food in such countries as Holland, and was, of course, open to many objections, especially on the score of doubtful clean-

liness and the presence of many varieties of bacteria, not all harmless, and products of their growth other than lactic acid. Ballot, in 1866, introduced the method of preparation of buttermilk for infants which is most in use today—namely boiling, with the addition of flour and sugar. This method received little attention until it was revived in Holland by de Yager in 1898, when its use spread rapidly to Germany, France, other parts of Europe and to South America. Today it holds a very high place all over the world as a food for infants, especially in some pathologic conditions, and in many regions would be considered indispensable. Though ordinary buttermilk from the dairy is most commonly used as the basis for this food, many prefer skim milk artificially soured by pure cultures of the lactic acid bacillus, or some similar organism. Few use it uncooked. Moll adds alkali in the cooking for the purpose of giving it a more pleasant taste, and obtaining more of the proteids in solution. Many reasons are given for the good results observed from the use of buttermilk. It is generally recognized that the casein in properly prepared buttermilk is present in a condition peculiarly well suited to digestion by the infant, and that the acidity of the milk probably favors gastric activity. Moreover, the very low fat content is advantageous in cases of deficient fat tolerance. The stools under the administration of buttermilk are invariably alkaline, and in acid fermentation the complete change in the reaction of the intestinal contents, and the resultant alteration in the flora may evidently be of benefit. Tissier, in publications from the Pasteur Institute in 1903 and 1905 seems to have been the first to call attention to the antagonistic action of the lactic acid bacillus to certain harmful intestinal bacteria, now so generally recognized and to have made intentional use

of it in therapeutics. Today it is well understood that among the few intestinal antiseptics that have any real value for the infant, buttermilk holds a place in the first rank.

Some question has been raised as to whether this action is due to the living bacilli or the lactic acid, but there is little doubt that the living bacillus, as present in raw buttermilk, is much more effective for this purpose. Buttermilk seems to have its greatest value in infantile atrophy and similar conditions, and as the first milk food in convalescence from acute intestinal disturbances. Prolonged administration occasionally causes untoward symptoms, such as "buttermilk fever," which necessitate its withdrawal.



The subject of psychotherapy occupies a constantly increasing space in modern literature. The American habits of living apparently give rise to a large proportion of nervous phenomena, whose nomenclature, classification, pathology, and therapy, are topics of frequent discussion, not to say debate. The indifference of physicians to these various disorders has compelled the sufferers to seek other ministrations, and according to the law of supply and demand, there have arisen various movements, such as Christian science, mental healing, faith-cures, and other lesser fads. The success of these movements with patients of a certain type, who may be included under the term "psychasthenics," has stimulated in the medical profession a new interest, leading to vigorous efforts to place psychotherapy upon a well-recognized basis and to divorce the therapy of *suggestion* from that of true hypnotism, which still labors under the ban of widespread suspicion and disapproval. There is a growing recognition of the fact that Christian science, for

example, accomplishes by its gentle persistency many a remarkable cure in persons of ill-controlled volition,—persons who are victims of an exalted or depressed nervous state, who have lost the power to inhibit sensations of mental and physical discomfort, and whose central and peripheral sensations are subject to gross exaggeration.

The Christian science movement has seriously menaced the public health in some respects, and has called forth fitful prosecution from municipal and state authorities, but the great body of the medical profession has been content for the most part to ignore the inroad upon their own work and to overlook the modicum of truth in Christian science healing. It has remained for the Church to point the way. The Episcopal Church in Boston produced a man, the Rev. Ellwood Worcester, who perceived that Christian science as a religion rested its success upon the claim of curing human illness; that its methods of cure involved spiritual ministrations; and that the orthodox creeds could as well apply such methods in their essence, without the mystery, deception, and fallacies inherent in the "Science."

The meaning of this departure among the clergy has been explained in Detroit by a series of talks by Rev. Mr. S. S. Marquis, who has been much interested in the subject. More recently the matter was presented by its originator at an Episcopal convention in this city, and discussed pro and con by other clergymen, physicians, and laymen.

The significance of this movement towards mental therapeutics among non-medical circles is two-fold; first, it means that it is an important factor in the treatment of certain diseases; second, that the medical profession has not supplied the demand for it,—a demand that is legitimate and reasonable. It therefore remains for the neurologists and alienists to continue their own good

beginnings in this respect, and for the general practitioners to familiarize themselves with the scientific basis of psychotherapeutics, and with the necessary details for carrying it out. The literature is growing more and more rich in this subject every month, and the meaning of it should not be lost upon practitioners of medicine.



The Annual Meeting. At this writing the arrangements for the annual meeting, our forty-third, to be held at Manistee, on Wednesday and Thursday, June 24th and 25th, are practically complete.

The scientific program, published in full in this issue, has never been surpassed in point of interest at any of our meetings. It covers a large variety of topics, so that every one, no matter what his interests may be, will find something—many things—in it which will be attractive. We are to have with us two representative men from outside the state. Dr. Hugh T. Patrick, Clinical Professor of Nervous Diseases in the Northwestern University, will address the medical section on Wednesday afternoon. The subject of Dr. Patrick's paper, "Remarks on Apoplexy," is a practical one and will receive close attention. On Thursday morning, Dr. Joseph C. Bloodgood, Associate Professor of Surgery in Johns Hopkins University, will speak before the general session. The subject of Dr. Bloodgood's address has not, as yet, been announced.

Too much praise cannot be given the local committees at Manistee for the arrangements which they have made. All the scientific meetings will be held under one roof, so that the members will lose no time in going from place to place. All sessions will be held in the Elks' Temple, where the registration office will also be located. The entertainment on Wednesday evening will be unique. We shall trust the local com-

mittee to give us a good time, our part being merely to be on hand at the boat dock at four o'clock.

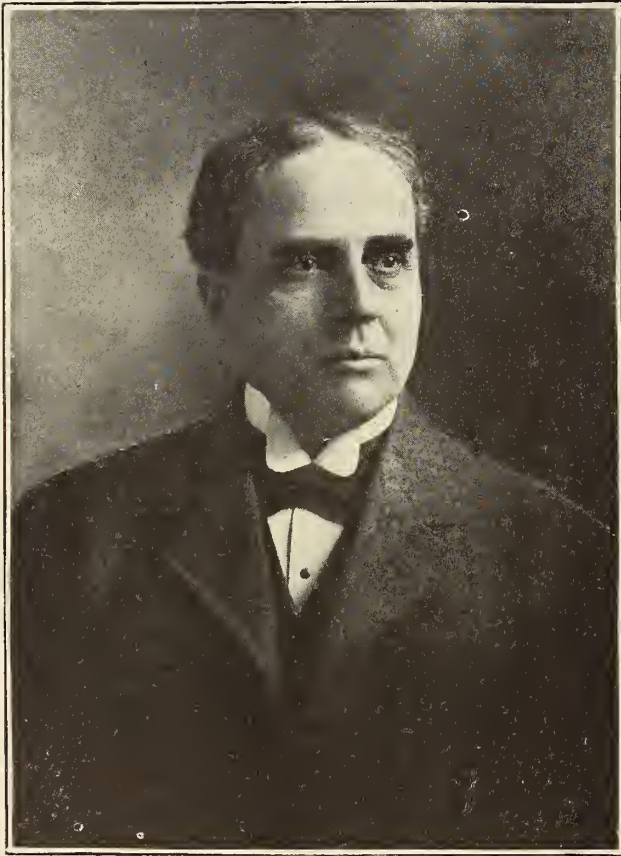
The general arrangement of the program will be: Tuesday afternoon, meeting of the Council; Tuesday evening, first meeting of the House of Delegates; Wednesday morning, meeting of House of Delegates at nine o'clock and general session at ten o'clock. Addresses of welcome, the President's address and nominations for president for next year will occur at this time. At one-thirty the sections will convene for a two and one-half hour session. From four o'clock until eleven come a boat ride and other pleasures. Anyone caught "talking shop" will be fined. Thursday morning, the sections will meet from eight-thirty until eleven, at which hour Dr. Bloodgood will address the general session. Thursday afternoon will be devoted to section work, adjournment taking place in time for the departure of trains.

There will be no railroad certificates to test the patience this year. Since the enactment of the two-cent law, conventions are not favored by the former "fare and one-third" rate. The price, however, remains the same as formerly, namely four cents per mile for the round trip, in place of three cents going and one cent returning.

"Every physician should deem it his duty, privilege and pleasure to attend the annual meeting, for he who has the welfare of his profession at heart, should not fail to devote these few days at her shrine, as no greater impetus for the hard work of the coming year can be given than the approval of the individual member expressed by his presence."



Shall we meet in the fall? There is a growing sentiment throughout the state for a change in the time of holding the annual meeting. As it is now arranged the meeting of the American Medical



Herman Ostrander, M. D.
President, 1907-1908

Association and those of various special societies come so close together that it is often difficult to arrange non-conflicting dates and impossible for many members to attend both the national and

state meetings. It is believed by many that a date in late September or October would be more acceptable to our members. The question will probably come up at Manistee. Think it over and come prepared to discuss it.



HERMAN OSTRANDER, M. D.

President, 1907-08.

For over twelve years the writer of this sketch has been associated with Dr. Ostrander. Together they have shared the vicissitudes of asylum life, together they have met disappointments and pleasures so that no one was more pleased than the writer to see his friend and co-worker elected to the presidency of the State Medical Society last June, feeling at the same time that the man honored the office.

Dr. Ostrander is a native of Michigan, having been born in Ypsilanti in July, 1856. When he was two years old, his parents moved to Lansing traveling by stage. It was then he first gave indication of that musical talent which in later years was to be such a delight to his friends, for he tells us "I squalled all the way." His early education was received in the public schools of Lansing and Jackson. Like so many of our medical men, he himself taught in the country schools until he was prepared to enter the Medical Department of the University of Michigan, from which he graduated in 1884.

After graduation, he entered practice at Lansing and held for three years the position of physician to the State Reform School for Boys. In 1888, he gave up general practice to enter the Michigan Asylum for the Insane at Kalamazoo as

assistant physician and was soon placed in charge of the colony of the institution. This system of caring for the insane, he was instrumental in developing and has always warmly advocated. While deeply interested in his work, Dr. Ostrander has never allowed his specialty to narrow him, but has kept up his interest in general medicine. At frequent intervals, he spends some weeks in the big medical centers, keeping abreast of the new in surgery and therapeutics. He has contributed to the leading journals and has taken active part in the medical societies of his home city, serving as secretary of the Kalamazoo Academy of Medicine for three years and filling the office of president for the year 1903. Last February, a local society for the prevention of tuberculosis was formed in Kalamazoo, and to Dr. Ostrander was given the honor of its presidency.

To know Dr. Ostrander well is to like him. He is broad minded, generous and considerate, has a genial disposition and is noted for his ready wit. He has ever been popular with his fellow practitioners and the many positions of trust and honor he has been chosen to fill, testify as to the high place he holds in his profession.

G. F. INCH.

Book Notices

Chronic Constipation and Allied Conditions. By J. Alexander MacMillan, B. A., M. D. Quarto, 257 pages; cloth, \$2.00. Kansas City, The Burton Company, 1908.

This book, written by one of the Detroit members of our society, is an interesting and instructive one. Moreover, it contains many practical points of importance, put forward in such a clear and concise manner, that they cannot fail to be helpful to the reader. It is on an important subject, one in which every medical man, no matter in what line he may be engaged, is interested and as the book is the outcome of the author's clinical experience, it cannot help but be a valuable aid to the practitioner.

The first chapter deals with the anatomy and physiology of the large bowel, the etiology of constipation and obstipation, diagnosis and the methods of rectal examination. Then follow chapters on the treatment of constipation, chronic colitis, and obstipation. Auto-intoxication receives attention in chapter eleven, and chapter twelve gives the complete histories of twenty-five illustrative cases.

While no method of treatment is neglected, special emphasis is laid upon the mechanical treatment by means of rectal tampons. The author has been most successful in his work along this line and has here given his experience fully and explicitly.

Dr. MacMillan is to be congratulated on his book. It should be widely read, for it is valuable.

Outlines of Psychiatry. By William A. White, M. D., Superintendent, Government Hospital for the Insane, Washington, D. C., Professor of Nervous and Mental Disease, Georgetown University, New York—The Journal of Nervous and Mental Diseases Publishing Company, 1907.

This volume is No. 1 of the Nervous and Mental Disease Monograph Series and its author modestly disclaims any expectation that it will displace the larger textbooks. He has, and with marked success, endeavored to simply and intelligibly place before the student a working knowledge of psychiatry.

After a physiological introduction, the definition, classification and treatment of insanity are discussed and then follows an excellent chapter upon the general symptomatology of mental disease. The chapter upon the examination of the

insane ought to illumine a field where too often dense ignorance prevails and it should be of distinct service in its hints as to methods of examination best calculated to elucidate the mental status.

The remainder of the book is devoted to a concise but clear presentation of the various forms of mental disease.

This is one of the best of the smaller works on psychiatry and will provide just what many students and not a few practitioners have long desired. It is printed in clear type on excellent paper.

Nervous and Mental Disease. For Students and Practitioners. By Charles S. Potts, M. D., Professor of Neurology in the Medico-Chirurgical College of Philadelphia. New (second) edition, thoroughly revised and greatly enlarged. In one 12mo. volume of 570 pages, with 133 engravings and 9 full-page plates. Price, cloth, \$2.50 net. Lea & Febiger, Publishers, Philadelphia.

This manual, of which this is the second edition, enlarged and brought down to date, is convenient in size, attractive in appearance and full of good things.

Its arrangement of subjects is excellent and if its size forbids great fulness, what is found here is well-said and to the point. Its illustrations, both original and borrowed, some of them in colors, are excellent. The practitioner who has digested the contents of this volume will be well-equipped for such neurological problems as he is apt to encounter in every-day practice and the student can here well ground himself in a field of medicine quite generally neglected.

Sixty pages can hardly do fair justice to the field of mental diseases, but the subject is probably as well presented as is consistent with so great condensation.

Glimpses of Medical Europe. By Ralph L. Thompson, M. D., Professor of Pathology, St. Louis University School of Medicine. Quarto, 235 pp., Illustrated. Philadelphia, J. A. Lippincott Co., 1908.

"One who lays no claim to being a literary man should not write a book to begin with. And of all subjects that might be chosen, a book on Europe is the one that most requires an apology. However, I am not going to apologize for the present volume, because I did not want to write it anyway. It began by my sending home a few letters to an editor who wanted to fill up a certain amount of space. Once started, it just naturally grew into its present form."

So says the author in the introduction and the above paragraph is typical of the spirit of the book. It is delightfully entertaining and, although filled with most useful information, it is in no sense a Medical Baedeker.

The author "glimpses" at the clinics, hospitals, professors, cafes and pensions, in Christiana, Copenhagen, Stockholm, Upsala, St. Petersburg, Berlin, Vienna, Paris, London and Liverpool. The illustrations are good. There is not a dull page in the book. Being attractively printed and bound, it would make a pleasing gift book for a medical friend; a gift sure to be appreciated.

secretary. Executive Committee—Carl S. Oakman, M. D., chairman; Anna Starring, M. D.; C. J. Johnson, M. D., secretary Lenawee County Medical Society; Geo. P. Heath, M. D., secretary Monroe County Medical Society; C. E. Simpson, M. D.; A. J. Warren, M. D., secretary Macomb County Medical Society; C. D. Morris, M. D., secretary Oakland County Medical Society; J. W. Keating, M. D., secretary Washtenaw County Medical Society. Reception Committee—F. B. Tibbals, M. D., chairman; E. B. Forbes, M. D.; H. M. Rich, M. D., Florence Huson, M. D.; J. A. MacMillan, M. D.

County Society News

First District.

On Wednesday, April 29, the fourth annual meeting of the First Councilor District Medical Society was held in Detroit at the Fellowcraft Club, corner of Wilcox and Farmer streets. In the afternoon there was a program of original papers, at which there was an attendance of about 75, and in the evening a banquet, at which 87 were seated. No business was transacted, but the papers occupied all of the afternoon session, and brought out pointed discussions.

Program:—"Nicotine Tolerance," C. W. Edmunds, M. D., Ann Arbor; "Sensitization and Its Relation to Practical Medicine," V. C. Vaughan, Jr., M. D., Detroit. "Report of a Case of Hereditary Chorea," Jason Morse, M. D., Pontiac; "Cystoscopic Findings in Cystitis," Ira D. Lorce, M. D., Ann Arbor; "Plastic Roentgenography," P. M. Hickey, M. D., Detroit; "Empyema," G. H. Lamley, M. D., Blissfield.

The banquet, with Dr. Reuben Peterson, of Ann Arbor, as toastmaster, provided an enjoyable series of toasts: "The First Councilor District Medical Society," George Dock, M. D., Ann Arbor; "Wanted—A Family Doctor," Frank B. Tibbals, M. D., Detroit; "Medicine and the Church," Rev. Lee S. McColester, Detroit; "Medical Education in Michigan," Flemming Carrow, M. D., Detroit; "Medicine and the Law," Judge Alfred J. Murphy, Detroit.

The officers and committees in charge were as follows: George Dock, M. D., councilor; A. N. Collins, M. D., president; W. D. Ford, M. D.,

Grand Traverse.

At the regular May meeting of the Grand Traverse County Medical Society, Dr. E. B. Miner read a paper entitled "The X-Ray as an Aid in Diagnosis," and showed a number of plates taken by himself to illustrate its usefulness.

Dr. M. S. Gregory has resigned his contract with the Order of Foresters and Dr. John Boyd, a graduate of the late Saginaw Medical College, has taken up the work.

SARA T. CHASE, *Sec'y.*

Huron.

The regular quarterly meeting of the Huron County Medical Society was held in Bad Axe, May 4. Dr. A. M. Francis read a paper on "The Diagnostic Significance of Pain," and Dr. W. J. Herrington one on "Leukæmia," with microscopical demonstration of the blood. Both papers were freely and lengthily discussed.

D. CONBOY, *Sec'y.*

Wayne.

At the meeting of the Wayne County Society, April 6, 1908, Dr. F. E. McClure reported the following case:

H. M., American, 82 years of age. Married. Both parents lived to be very old, does not know what they died of. Has lost track of his brothers and sisters. Habits exemplary. Smokes moderately. Has never used any drug. Denies any venereal infection or exposure.

I first saw him three months ago and found

his present wife to be his third one. She is 46 years of age and the mother of four boys, the youngest 7 years old. He has had children by both previous wives, but they are grown and gone. He has always been remarkably well and until his retirement was engaged in the life insurance business. Says he has never been sick excepting for a left hydrocele, which was drained ten years ago with no recurrence, except, he says, that the doctor injured the testicle at the time of operation, and it has been sore ever since.

Two years ago he had an attack of paralysis, beginning at the right great toe and during the ensuing two months it gradually spread upward along the right leg and side, and involved the right arm and hand so that for six months he could not use the right leg or hand at all. He gradually recovered from this and for the past year has been able to walk, feed himself and write, with great difficulty. Two weeks before I saw him, he had a sudden attack of paralysis of the left side. He was standing at the time and fell down and for two days could not walk. After that he could use his left arm and leg "as well as ever." But ever since this last attack he has suffered attacks of typical neuralgia of the fifth nerve on the right side. Bowels and urine normal.

I found a man remarkably well developed and preserved for his years. Thoracic and abdominal organs negative. Heart, particularly strong, all sounds clear, pulse 72, regular, volume good, arteries soft and compressible. Left testicle enlarged. In walking his right leg is stiff and he partially drags it. Speech scanning, slight nystagmus and intentional tremor. Sensory areas normal. Mild senile dementia as indicated by childishness and irritability. Complained of neuralgia and sleeplessness. I prescribed codeine, KI, and local applications for the neuralgia, which soon disappeared and has not returned, and veronal for the sleeplessness, but with no results. I then prescribed small doses of chloral and potassium bromide. His insomnia, however, instead of improving, grew worse and seemed to be worse after taking the medicine than before. I increased the doses gradually until he was taking 40 grains of the chloral and sixty grains of the bromide at a dose. This only made him worse. I then added hyoscine hydrobromate to the prescription, increasing it until he was taking grs. 1/20 at a dose, but with no results. I then added morphine sulph. to the hyoscine, increasing up to

grains 1 of the morphine and grs. 1/20 of the hyoscine, but no sleep and increasing restlessness. Morphine grs. 1/2, hyoscine grs. 1/50 and atropine grs. 1/75, hypodermically gave no better results and finally in despair I gave him, one month ago, morphine grs. 3/4, hyoscine grs 1/20 and atrophine grs. 1/25, hypodermically. Almost immediately he fell into such a deep sleep that I thought he might not awaken and so told the family. Before giving it to him I had explained to his wife that this was an enormous dose for one so old, that bad results might follow, but gave my reasons for so doing, to which she gave her consent. Four days before this he had been unable to pass urine and catheterization had been resorted to and continued up to that night. He slept heavily from 11 p. m. until 8 a. m., when he awakened unusually clear mentally and passed urine normally. That night, however, he again became unmanageable, so I repeated the above dose. He slept "beautifully" all night, awakened much refreshed and has been better mentally and nervously, now one month, than for a year past, passing bowel contents and urine naturally and normally and with no repetition of the medicine. His left testicle, however, has been growing worse and, my suspicions becoming aroused, and questioning I learned that for a year past he has been incapable of orgasm but that his sexual desire seemed all the more increased on that account; that that in fact was his worst symptom and that on that point he was unmanageable. As they are too poor to employ an attendant for him and his wife refuses consent to have him removed to the state or county hospital this is a most perplexing complication to handle. There is a suspicion of malignancy of the left testicle in my mind but there is also a question of the effect of his extreme erotism upon it. Judging from the character of his pulse he may live several years yet.

Good, in the fifth volume of his *Study of Medicine*, published in 1826, refers to a somewhat similar case reported by Norris and published in the first volume of the *Transactions of the Medical Society of London*. In this case the erotism was caused by a "tumour" in the neighborhood of the prostate gland and was "cured when this had been brought to a head and incised."

SURGICAL SECTION.

At the meeting of the Surgical Section, held April 27, Dr. W. H. Morley read for Dr. W. P. Manton the latter's paper on "The Relation of

Weight of the Placenta to the Weight of the Unborn Child." Pointing out the function of the placenta in elaborating food material from the maternal blood, Dr. Manton suggests that the name "antenatal breast" is as applicable to the placenta as the older term "fetal lung."

Granting that the development of the placenta, the extent of its functioning cell surface, and the activity of the chemical change all affect the development of the fetus, a study of the placenta and the new-born child still shows a close relationship between their weights.

In this investigation Manton studied the records of four hundred cases at the Woman's Hospital. The average weight of the child was seven pounds three ounces, that of the placenta one pound three ounces—a ratio of six to one. With one exception the placental weight gradually increases with that of the neonatus. This exception obtains in the case of children weighing from four to five pounds, where the placenta weighs less than in the case of a three or four-pound baby.

In primiparous women both the placenta and child are smaller than in multiparous women.

Conclusions—As a rule the development of the placenta goes forward with that of the child, and its size may be taken ordinarily as an index of the weight development of the latter. There may be individual variations, but the normal ratio between child and placenta is six to one.

Dr. C. H. Judd then presented a paper entitled "An Argument for the Routine Practice of Pelvimetry by the General Practitioner." This paper will appear in an early issue of *The Journal*.

Election of officers for the next year resulted in the choice of Dr. G. E. Potter as chairman and Dr. A. D. McAlpine as secretary.

Dr. B. R. Shurly reported a case of fibroma of the left vocal cord in a man of 22 and exhibited the specimen.

C. E. SIMPSON, *Sec'y*.

At the annual election, held on May 18, the following officers were elected: President, Dr. W. P. Manton; vice-president, Dr. A. H. Bigg; secretary-treasurer, Dr. G. H. McFall; directors, Drs. F. B. Tibbals, J. H. Carstens, J. N. Bell, P. M. Hickey, A. P. Biddle. Drs. H. W. Longyear and W. F. Metcalf were re-elected as directors of the Defense League.

News

The Annual Clinic of the Alumni Association of the Detroit College of Medicine was held from May 20 to 28 inclusive. The attendance was large, the first day bringing a registration of 160. Clinics, lectures, and demonstrations were given daily by members of the teaching force of the Medical School, while in addition there were several visiting men who gave clinics. On the 20th, J. B. Deaver, of Philadelphia, gave an operative clinic in abdominal surgery at Harper Hospital at 11 a. m. and an address in the evening at the Art Museum on the "Scope and Limitations of Gastric Surgery;" on the 22nd, Max Einhorn, of New York, gave a clinic on diseases of the stomach at St. Mary's Hospital; on the same day, in the afternoon, the association was entertained at the Eastern Michigan Asylum, Pontiac, by Dr. E. A. Christian, who gave a clinic in differential diagnosis of insanities, and a luncheon afterwards. On the 23rd, Prof. A. Martin, of Berlin, the world-famous gynecologist, gave a clinic at Harper, and was guest of honor at a luncheon in Harmonie Hall; H. A. Hare, of Philadelphia, gave a general medical clinic at Harper Hospital; on the 25th Frank Billings, of Chicago, conducted a clinic on kidney diseases at St. Mary's, and in the evening spoke at the Art Museum, under the auspices of the Wayne County Medical Society; on the 26th J. Zeisler, of Chicago, demonstrated diseases of the skin at St. Mary's, and in the afternoon Dr. Angus McLean entertained the association by a boat ride and a dinner at the Star Island House, the Flats; on the 27th George W. Crile, of Cleveland, spoke at Harper on the "Hemolytic Test in Its Relationship to Malignant Growths"; on the 28th Robert H. Babcock, of Chicago, gave a clinic on diseases of the heart and lungs, at Harper. On that afternoon a luncheon and the annual meeting of the Alumni Association were held at Harmonie Hall, while the Commencement exercises and banquet of the graduating class were held in the evening.

Dr. T. S. Langford, of Jackson, is spending a year studying in Europe. At present he is in Killian's clinic at Freiburg, Germany.

Dr. B. H. McMullen, of Cadillac, has been appointed division surgeon of the Ann Arbor Railway.

Small pox has been reported in Sciota town-

ship, in Grawn, Casco, Glenn, Ganges, and Condis. A considerable epidemic of measles has prevailed in Watervliet.

Health Commissioner Dr. W. A. Evans, of Chicago, at the annual meeting Tuesday, May 19, of the Detroit Society for the Study and Prevention of Tuberculosis, gave a popular address on the prevention of the disease. President S. T. Douglass made the annual report and said that a visiting nurse would be employed by the society to co-operate with the board of health. Members of the board of directors were elected as follows: S. T. Douglas, Dr. B. R. Shurly, Dr. H. J. Hartz, Dr. E. S. Sherrill, Dr. C. G. Jennings, Mrs. Philip H. McMillan, Miss Clara E. Dyar, Mrs. William A. McGraw, Miss Gertrude Russel.

Dr. V. C. Vaughan, of Ann Arbor, was elected president of the American Association of Physicians at the annual meeting, held at Washington, May 12th.

There has recently been an epidemic of typhoid at St. Clair.

Dr. W. E. Chapman, of Cheboygan, has been appointed assistant surgeon of the Michigan National Guard.

Dr. O. E. Fischer, of Detroit, a member of the Detroit Mycological Club, gave a lecture on "Michigan Mushrooms and Toadstools" before the Nature Club of Battle Creek, on May 7. Dr. Fischer has over a hundred stereopticon slides, which he has prepared from photographs of the various fungi.

The Board of Poor and Health Commissioners of Kalamazoo have elected as their president Dr. O. H. Clark. Dr. D. J. Levy is health officer, Dr. Ralph H. Balch is a member of the board for three years, and Dr. J. W. Bosman for four years.

Dr. J. J. Mulheron, of Detroit, has retired from practice, to live on his farm in Greenfield.

A New York city justice recently rendered a decision that osteopaths are practitioners of medicine, and as such should receive registration at the Board of Health office and sign death certificates.

Harper Hospital in Detroit was recently the recipient of a \$10,000 legacy from Harriet Stringham, deceased April 28.

Dr. C. B. G. de Nancrede, of Ann Arbor, is the newly elected president of the American Surgical Association.

Dr. Allen D. McLean, U. S. N., recently in charge of the recruiting office in Detroit, has gone to Portsmouth, N. H., to serve in the naval hospital.

For the treatment of patients having throat and chest troubles, and who are not able to afford the services of a paid specialist, the Detroit Throat and Chest Free Dispensary has filed articles of association in the Wayne County clerk's office. The association already has a house on Adams avenue, near Hastings street, which will be used for the dispensary. It will have accommodations for a few persons who may need to remain there, but most of the patients attended will be transients.

Dr. E. L. Shurly will be at the head of the institution. The other incorporators are: Charles H. Hodges, George H. Barbour, Jeremiah Dwyer, Frank J. Hecker, H. D. Shelden, J. L. Hudson and S. Y. Seyburn.

Dr. and Mrs. Johann M. Flintermann of Detroit have left for a three month's trip to Europe. Dr. Flintermann will visit the principal hospitals where nervous disorders are treated.

A complimentary luncheon to Dr. August Martin of Berlin was given on Saturday, May 23, at the Harmonie Club in Detroit, under the auspices of the Wayne County Medical Society. Dr. Martin visiting this country for the especial purpose of attending the meetings of the American Gynecological Society and the American Medical Association.

Marriages

Dr. Merritt Galbreath of South Haven to Miss Bessie Moore of Kalamazoo, April 6.

Dr. F. P. Camelon of Detroit to Miss Edith Leroy Hartwell, in March.

Dr. John Blake, Detroit, to Miss Bertha V. Byrne of Belle River, Ont., April 29.

Dr. H. V. Vaughan of Morenci, to Miss Ethel Shaw of Cleveland, April 1st.

Deaths

H. B. Peterson, M. D., of Owosso, died at his home recently, aged 63.

De Witt Spalsbury, M. D., of Ypsilanti, died in April at his home.

J. S. Tabor, M. D., of Cassopolis, died April 29 of morphine poisoning, aged 33.

A. J. Pettis, M. D., of West Branch, died on May 18 at Harper Hospital in Detroit, following an operation for hip trouble, aged 38.

Dr. G. A. Curriden, a resident of Detroit, and a traveling salesman for a New York proprietary house, died suddenly in the Herkimer Hotel in Grand Rapids, April 15, aged 40.

Stephen H. Clisbe, M. D., a practitioner for 38 years in Coldwater, died of diabetes April 7, aged 65.

Charles W. Ellis, M. D., a prominent colored physician, died on April 18 of pneumonia, at his home in Saginaw, aged 46.

Arthur G. Oven, M. D., of Petoskey, died from perforation of the duodenum, April 18. He had practised medicine for 25 years, and was 56 years of age.

Godfroy Lorenzo, M. D., a pioneer resident and physician of Monroe, died suddenly of heart failure at his home, April 22, aged 79.

E. B. Harris, M. D., for 30 years a practitioner in New Haven, died in Kansas City, Mo., April 22, aged 70.

Alexander Strierner, M. D., died suddenly from heart disease, at his home in Hillsdale, April 25, aged 58.

James N. Buckham, M. D., a well-known practitioner of Flint, died in Rochester, Minn., following a surgical operation, April 18, aged 50.

Henry Bennett Gammon, M. D., of Hastings, died at the West Side Hospital in Chicago, April 21, aged 39.

John B. Laing, M. D., died at his home in Otisville, April 6, from nephritis, aged 62.

surprised to learn his age. He came to Lapeer thirty-five years ago and was one of the best loved physicians of the country.

Dr. McColl was born in Ontario in 1844, and his mother, now ninety-five years of age, survives him. His medical education was obtained at the University of Michigan and Bellevue Hospital Medical College, where he graduated in 1871. Dr. McColl also spent two years in Europe, where he took special work in some of the prominent medical institutions. In 1897, he took a trip around the world, and his office was filled with relics obtained from Alaska, China, India, Palestine, and other foreign countries.

He was the first president of the Lapeer County Medical Society, was president of the Michigan State Medical in 1893, and had several times been president of the Northeastern Medical Society. He had several terms as member of the school board of Lapeer, and was moderator of the Presbytery.

Hugh McColl was a sturdy man, but a lovable man. Three years ago, the members of the Lapeer County Medical and Northeastern Medical Societies presented him with a loving cup.

Repeated attacks of rheumatism left his heart with a mitral regurgitation, but with care he was able to do an immense amount of work. His knowledge was encyclopedic and was ever ready at his command. About four years ago his health began to fail and two years ago he gave up practice and went home to his mother at Hubrey, Ontario. After a stroke of apoplexy, he died on Easter Sunday. The remains were laid to rest at St. Thomas, in the old family burial ground.

H. E. RANDALL.

Correspondence.

Chicago, May 1, 1908.

To the Editor:—

I have just read your editorial in the April number of the Journal of the Michigan State Medical Society, and it is so palpably unfair that I cannot help making answer, because I believe that you have written simply from your reading of the J. A. M. A. and not from your own knowledge of either the professional or financial standing of the parties attacked.

It would appear that you charge Dr. Abbott

Obituary

HUGH McCOLL, M. D.

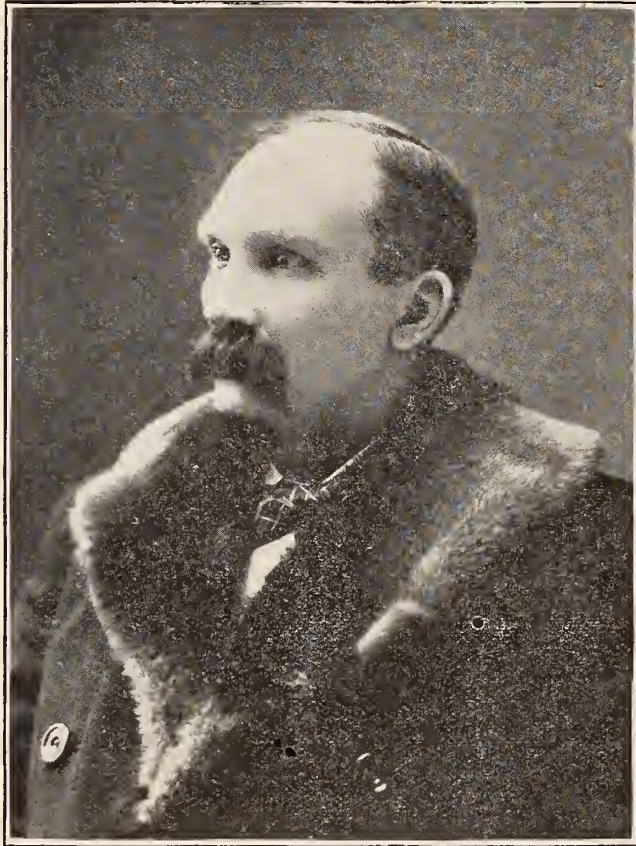
1844-1908.

Hugh McColl is gone. He was a familiar figure at our state and national medical meetings. In twenty-five years, he told me, he had not missed a meeting. He looked beyond his years, being only sixty when he died, and many were

with bringing or attempting to bring into life, in the United States, a new medical sect—nothing is farther from the truth. Prof. A. Burggraeve, of Ghent in Belgium, was the first to preach, not a new sect, but accuracy in therapeutics, and the writer first made the attempt of introducing this idea into this country, but holding to strictly scientific means his propaganda fell flat and at a cost to him of over \$20,000. Dr. Abbott was one

other "form of aberration" in the substitution of an active principle of known physiologic action, for an uncertain and variable drug or galenic preparation of same.

You say the "humbuggery of alkalometry has been exposed in its relation to some of the Abbott drugs" and you cite Calcidin—now why pick out Abbott? There are at least a dozen manufacturers who are making iodized calcium and brown



Hugh McColl, M. D.
1844 - 1908

of my first converts and my failure to supply him with what he wanted in his practice led him to manufacture for himself, and being a man of eminent ability as a promoter he recognized the fact that the majority of physicians did not want strictly scientific medicines and he gave them what they wanted, while at the same time advocating the teachings of Burggraeve, and I want to say to you that there is no "empiricism" or any

iodide of lime, but they, in the effort to kill off Abbott, are forgotten; now the only difference that I can see is that Abbott has, in order that his customer should be protected in getting just what he wanted, protected his product with the trade mark "Calcidin"; this does not in any manner prevent anyone from making iodized calcium, but it does prohibit the use of the name "Calcidin." Next you say that Cactin is one of the

frauds perpetrated by Abbott—now in all fairness, doctor, have you ever used Cactin, or have you at any time ever seen a sphygmographic tracing of the effects of this drug?—I am in a position to speak positively upon this article, both from long personal use as well as in my practice, and I am in a position to contradict flatly Prof. Mathews' findings with the drug—his tests being made upon animals and without the sphygmograph, while my observations have been made upon the human subject and with the sphygmograph as a guide. To prove my assertion I am prepared to send to you tracings of my own pulse in repose and tracings taken 30 minutes later after having taken in the interim 1/67 grain of Cactin, the demonstration fully showing that something has had a marked effect on the heart's action which changed the character of the tracing, and as nothing but the Cactin had been taken the credit must be given to that drug.

But the diatribe against this and other products of the Abbott Alkaloidal Co. is in keeping with the motto adopted by the J. A. M. A., "anything to kill Abbott," and the funny part of it is that it is not the doctors that want Abbott killed—it is the big manufacturers who are anxious for the killing, and this causes a rather peculiar and ugly thought to arise in the minds of the many—why should the J. A. M. A. play into the hands of these overgrown pharmaceutical houses by attacking Abbott? Again why? And then some more.

You say the chief officers of this commercial house are men who practice very little, if any, medicine actively. I want to disabuse your mind of this fallacy. Dr. Abbott, Dr. Waugh and myself are registered physicians in Illinois, and I am ready to demonstrate that our income from active practice at least equals and probably exceeds your own, while Dr. Burdick is fully occupied with editorial work; and do you consider our position any worse than that of Professor Hare, who is paid a good big salary by Parke, Davis & Co. for his services as editor of the *Therapeutic Gazette*—truly a house organ started for the purpose of booming *Cascara Sagrada*, *Yerba Santa*, *Yerba Rheums*, and many other specialties introduced by that firm, and further, I do not believe from my own personal connection with Parke, Davis & Co., that a medical convention is held in which some paid representative of this firm is not present; not only is this a fact, but there are also among the teachers of *materia medica* and therapeutics a number of paid em-

ployees of this firm.

Next you talk of something which of necessity you know nothing, to-wit, this so-called bond issue. It is not beyond business ethics that a house may issue debentures of many kinds—some mortgage notes, some call loans, and some long-time interest bearing notes; anything wrong in Abbott doing what others are doing? The International Harvester Co. has out over \$5,000,000 in bonds among their customers, the farmers, and covered by what? Promise to pay, that is all, while Abbott has much more than the value of all the bonds outstanding in real property. Now I hold a goodly wad of these bonds which I have paid for in good hard coin at par, and I only wish that I had the money to increase the size of the bunch, because I know that after the stock dividends are paid I have received and am going to receive a bunch of interest and co-operative division of profit such as is not to be had from any other investment that I have made.

And then you talk about nostrums. Why Doctor! Abbott does not own a secret remedy nor to my knowledge did he ever present one to the medical profession—while I should think that your nostrils would be full of that kind of stench arising from your home city.

The whole trouble is, doctor, that the very instant that any man in any profession or business succeeds sufficiently to push his head above his fellows, some envious chap shies either a rotten egg or decayed vegetable at the shining mark, and when this successful man becomes heavy enough to pinch some other heavy fellow's toes, the cry is "down him." In my forty years of business experience I have seen this exemplified in many cases and in many places, even in your own city.

Excuse this long harangue, but this article looked to me so preposterous that I could not help but make answer, and also to let you know that there is at least one man who is willing to be "defrauded" by Abbott and his bonds, and who swears by his honesty of purpose in the fight he is making for a rational and accurate therapy.

Fraternally yours,

W. T. THACKERAY, M. D.,
Jefferson College Class 1865.

Bay City.

Bay City, May 1, 1908.

To the Editor:—

I am sending you under separate cover a preparation which, as you will see, corresponds very

closely to the various so-called "clay dressings" which are on the market selling at from about 30 to 60 cents per pound.

This preparation was brought to the attention of the members of the Bay County Society by Dr. J. W. Hauxhurst at the last meeting. It is composed of the ordinary "whiting" (which can be bought for a few cents per pound at any hardware dealer) mixed with enough glycerin to make the desired consistency and scented with a little volatile oil.

This makes a smooth paste; is very cheap; can be prepared in any quantity and at any time in

the office; and in making it up any medicament may be incorporated in it by mixing with the glycerin, as lead and opium, methyl salicylat, ichthyol, etc. On account of its cheapness and ease of preparation, it can be changed as frequently as desired when using.

Thinking the above information might prove of some use to the members of the profession throughout the state, I was instructed to send this to the state journal.

Yours very truly,

R. C. PERKINS, Sec'y.

PROGRAM

OF THE

43rd Annual Meeting

OF THE

Michigan State Medical Society

Manistee, June 24-25th 1908

THE COUNCIL.

Chairman—C. B. Burr, Flint.
 Vice-Chairman—W. T. Dodge, Big Rapids.
 Secretary—W. H. Haughey, Battle Creek.

Tuesday, June 23rd, 3 P. M.

Wednesday, June 24th, 2 P. M.

Thursday, June 25th, 2 P. M.

for each major fraction thereof; but each County Society holding a charter from this Society, which has made its annual report as provided in this Constitution and By-Laws, shall be entitled to one delegate and one alternate.

HOUSE OF DELEGATES.

ELKS' TEMPLE.

President—HERMAN OSTRANDER, Kalamazoo.
 Secretary—B. R. SCHENCK, Detroit.

BY-LAWS—CHAPTER IV, Section 1. Each Component County Society shall be entitled to send to the House of Delegates each year one delegate and one alternate for every 50 members, and one

First Session, Tuesday, June 23rd.

8 P. M.

1. Call to order by the President.
2. Roll Call.
3. Reading of Minutes of the last Annual Meeting.
4. Report of the Council.
 W. T. DODGE, Big Rapids, Vice-Chairman.
5. Report of Committee on Legislation and Public Policy.
 W. H. SAWYER, Hillsdale, Chairman.

6. Report of National Legislative Council, A. M. A.

FLEMMING CARROW, Detroit, Michigan Member.

7. Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

WALTER R. PARKER, Detroit, Chairman.

8. Miscellaneous Business.

(a) Election of Committee on Nominations to nominate:

1st, 2nd, 3rd and 4th Vice-Pres.

Four Representatives in House of Delegates,

A. M. A. 2 for 1 year and 2 for 2 years; 2 alternates, for 2 years.

To fix place of meeting for 1909.

(By-Laws, Chap. VI., Sec. 2 (as amended June 12, 1903.))

The House of Delegates shall elect, annually, at its first meeting, a Nominating Committee of Five from the House of Delegates, no two of whom shall be from the same Councilor District.

(b) Appointment of other Working Committees.

(c) Proposal of Amendments to the Constitution.

Proposal of Amendments to the By-Laws.

Other Miscellaneous Business.

Adjournment.

Second Session, Wednesday, June 24th.

9 A. M.

1. Reading of the Minutes of the Previous Session.

2. Unfinished Business.

(a) Amendments to By-Laws.

3. Report of the Committee on the Study and Prevention of Tuberculosis.

W. E. COATES, Onkama, Chairman.

4. Report of the Committee on the Patent Medicine Evil.

G. A. HAFFORD, Albion, Chairman.

5. Miscellaneous Business.

Adjournment to General Meeting.

Third Session, Thursday, June 25th.

8 A. M.

1. Reading of the Minutes of the Previous Session.

2. Report of Committee on Nominations.

3. Unfinished Business.

4. Report of Committee on Vital Statistics.

H. B. BAKER, Lansing, Chairman.

5. Report of Committee on Venereal Prophylaxis.

A. P. BIDDLE, Detroit, Chairman.

6. Miscellaneous Business.

Adjournment to General Meeting.

GENERAL MEETING.

ELKS' TEMPLE.

President—HERMAN OSTRANDER, Kalamazoo.

State Secretary—B. R. SCHENCK, Detroit.

First Day, Wednesday, June 24th.

10 A. M.

1. Call to Order.

2. Prayer.

REV. J. J. STALEY.

3. A Word of Welcome.

HON. AUGUST FIELD, Mayor of Manistee.

4. Address of Welcome on behalf of the Medical Profession.

DR. J. A. CHRISTENSON, President Manistee County Medical Society.

5. Report from the House of Delegates.

B. R. SCHENCK, Detroit, State Secretary.

6. Address of the President.

HERMAN OSTRANDER, Kalamazoo.

7. Miscellaneous Business.

8. Nomination of President for 1908-1909.

Adjournment.

ENTERTAINMENT.

Wednesday afternoon, from 2 until 4 o'clock, the ladies of the Lakeside Club, assisted by the wives of the members of the Manistee County Medical Society, will receive the visiting ladies at the Knights of Pythias Hall.

At 4 o'clock the sections will adjourn and all members and visiting ladies will be the guests of the Manistee County Society at a boat ride, entertainment and barbecue.

Second Day, Thursday, June 25th.

11 A. M.

1. Unfinished Business.
2. Report from the House of Delegates.
3. Address by the guest of honor.

DR. J. C. BLOODGOOD, Associate Professor
of Surgery, Johns Hopkins University,
Baltimore.

Subject—

4. Miscellaneous Business.
5. Announcement by the Committee on Nominations on the Result of the Ballot for President.
6. Introduction of the President-elect.

Adjournment sine die.

SECTION ON GENERAL MEDICINE.

ELKS' TEMPLE.

Chairman—D. M. COWIE, Ann Arbor.
Secretary—G. F. INCH, Kalamazoo.

On account of the length of the program, and in order to give every one an opportunity, the fifteen minute rule will be enforced.

The Secretary of the Section will collect all papers as soon as read.

Discussions are limited to five minutes.

First Session, Wednesday, June 24th.

1:30 P. M.

1. The Diagnosis of Incipient Pulmonary Tuberculosis.

COLLINS H. JOHNSTON, M. D., Grand Rapids.

Eighty per cent of incipient cases of pulmonary tuberculosis are curable. Must not depend upon finding bacilli in sputum to make diagnosis. May have incipient disease without cough, expectoration, fever or tubercle bacilli in the sputum. An incipient case is one with slight infiltration limited to apex or small part of one lobe; no tubercular complications, slight or no constitutional symptoms, elevation of temperature, acceleration of pulse, expectoration. Diagnosis requires painstaking and repeated examinations. X-Rays sometimes of value in hands of an expert but with untrained observers frequently lead to erroneous conclusions, hypodermic use of tuberculin of great value in making an early diagnosis. Absence of reaction after use of 10 milligrams in early cases warrants the belief that no tuberculosis is present. Value of the Calmette test not yet positively determined, but all observers agree that it is one of the most useful aids to diagnosis in doubtful cases. The author believes it is less reliable than the hypodermic test. Of 20 cases which reacted to the latter test, six failed to react to the ocular test,

Discussion opened by H. J. Hartz, M. D., Detroit.

2. Remarks on Apoplexy.

Hugh T. Patrick, M. D., Chicago.

A false impression as to the more frequent causes and the nature of apoplexy. A false impression as to the prevailing pathology and causes of apoplexy is quite general. Taking all cases, thrombosis is much more frequent than hemorrhage. Points of distinction and differential diagnosis. Treatment during and subsequent to attack.

Discussion opened by David Inglis, M. D., Detroit.

3. Poisonous Proteids.

VICTOR C. VAUGHAN, M. D., Ann Arbor.

The author of this paper will attempt to show that the essential part of all bacterial cells consists of proteid material, and that every true proteid contains a poison. Will also attempt to show that there is more or less danger in injecting whole proteids into the human body, whether these be bacterial cells, horse serum, egg-white or other proteid material; also that good effects can be obtained by injecting the non-poisonous part of the proteid material. He proposes that the non-poisonous part of the typhoid bacillus and of the tubercle bacillus be used in the treatment of typhoid fever and tuberculosis.

Discussion opened by James D. Munson, M. D., Traverse City.

4. What Can be Done for Acute Inflammation of the Upper Air Passages.

JOHN V. WHITE, M. D., Detroit.

Introduction—Anatomical consideration. Method of treating acute inflammation of the pharynx and nose. Importance of removal of local infection.

Discussion opened by Edward J. Bernstein, M. D., Kalamazoo.

5. Lymphatic Leukemia.

WILFRID HAUGHEY, M. D., Battle Creek.

General considerations; etiology; diagnosis; prognosis; treatment. Report of a case with blood findings. Illustrated by charts.

Discussion opened by V. C. Vaughan, Jr., M. D., Detroit.

6. The Treatment of Exophthalmic Goitre.

JEANNE SOLIS, M. D., Ann Arbor.

1. Introductory review of the pathological theories of the disease upon which a choice of treatment must be based. 2. A brief review of the various methods of treatment. 3. A special consideration of the indications for and the advantages of the use of the direct electric current in the treatment of exophthalmic goitre. 4. The method of the application of the direct electric current in this disorder. 5. Results of this method of treatment as shown by cases treated.

Discussion opened by Blanche Epler, M. D., Kalamazoo.

Adjournment at 4 P. M. to Boat Ride.

Second Session, Thursday, June 25th.

8:30 A. M.

1. A Practical Method of Estimating and Recording the Opsonic Index.

A. W. CRANE, M. D., Kalamazoo.

The reasons are given why Wright's method will not be used in general medical practice. A method is proposed by which much time is saved and greater accuracy secured. By this quick method, the average number of bacteria per leucocyte and per cent of phagocytes are both obtained, together with a means of making a correction for differences in the density of bacterial suspensions, on each slide. The faults of the present method of stating results are emphasized and another method of recording the Opsonic factors is explained.

Discussion opened by R. E. Walker, M. D., Ann Arbor.

2. Recurrent Vomiting in Children.

HERBERT M. RICH, M. D., Detroit.

Definition. Pathology. Association with Acetonemia. Symptoms. Prognosis. Illustrative Cases. Treatment. Importance of Recognition.

Discussion opened by Thomas B. Cooley, M. D. Detroit.

3. Diagnosis of Oesophageal Obstruction.

GEORGE DOCK, M. D., Ann Arbor.

Obscurity of the subjective symptoms; importance of early recognition; interpretation of symptoms; confirmation by instrumental examination; methods of the latter, soft tube, probe, oesophagoscope, diagnosis of location of obstruction, of nature of lesion, of secondary or complicating conditions.

Discussion opened by B. R. Shurly, M. D., Detroit.

4. Feeding and Bathing in Typhoid Fever.

CHARLES G. JENNINGS, M. D., Detroit.

Discussion opened by A. H. Rockwell, M. D., Kalamazoo.

5. Treatment of Chronic Diseases of the Heart by Carbonated Mineral Baths and Auxiliary Exercises.

WILLIAM L. WILSON, M. D., St. Joseph.

1. History of carbonic acid baths. Nauheim treatment; Franzensbad baths; artificial Nauheim baths. 2. The writer's method of giving carbonated baths. 3. Physiological action (a) on the heart and blood-vessels, (b) on the blood, (c) on the nervous system (d) on tissue metabolism. 4. Exercise treatment, (a) respiratory exercises, (b) massage, (c) resistance exercises. 5. Dietary rules. 6. Indications for treatment. 7. Contra-indications. 8. Prognosis. 9. Conclusions.

Discussion opened by George Dock, M. D., Ann Arbor.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.

1. Distinction between Hysteria, Hypochondria, Neurasthenia and Simulation.

CARL D. CAMP, M. D., Ann Arbor.

The distinctive features of these four conditions are considered from a clinical, pathological and therapeutic standpoint.

Discussion opened by Charles W. Hitchcock, M. D., Detroit.

2. Diagnosis and Treatment of Pleurisy with Effusion.

FRANK SMITHIES, M. D., Ann Arbor.

Cases frequently arise presenting difficulties with respect to both diagnosis and treatment. Diagnosis depends upon the correct interpretation of carefully observed physical signs. Analysis of fifty cases; value of the cyrtometer, saddle tape and observation of the movements of the diaphragm. The percussion findings, movable dullness; the paravertebral triangle of dullness (Grocco's sign). The data from auscultation. Radiography. Exploratory puncture.

Treatment: Each case a distinct problem. Often depends on features in diagnosis. Value of early aspiration. Dangers of aspiration. Quantity of fluid to be removed. The class of cases which respond to medical treatment. The use of purgatives; of salicylates, etc. The Barr method. Means for restoring function to lung. Specific treatment: Tuberculin, vaccines.

Discussion opened by William M. Donald, M. D., Detroit.

3. Hypertrophic Stenosis of the Pylorus.

WILLIAM M. DONALD, M. D., Detroit.

Hypertrophic stenosis of the pylorus in infants. Simple spasm of the pylorus in infants. First description of this disease by English clinicians two or three years ago. Varieties, symptoms of the disease, causation, prognosis, treatment, medical and surgical, report of four cases in one family.

Discussion opened by I. L. Polozker, M. D., Detroit.

4. Diet and Digestion.

F. J. GRONER, M. D., Grand Rapids.

Dietetics as prophylactic against and as a partial cure for disease has been neglected in the curriculum of our medical colleges and in our medical literature. Many of our ills come from improper and badly cooked foods eaten at improper times and in an improper way. Gastro-intestinal catarrh causes auto infection, this in turn accounts for many diseases. From tables recommended exact portions of food principles can be prescribed, the same as food for infants or exact doses of medicine.

Discussion opened by William Fuller, M. D., Grand Rapids.

5. What the Druggist Does for the Doctor.

MINTA PROCTOR KEMP, M. D., Detroit.

Recent criticism of the lay press. Exploiting new remedies. Products of the manufacturing chemist, necessary division of labor, cost of production. Proprietary remedies imitated in U. S. P. Purpose of U. S. P. Remedies brought out by druggists. Druggist's method of testing drugs. Present laboratory work, bacterial vaccines, etc.

Discussion opened by Charles T. McClintock, M. D., Detroit.

SECTION ON SURGERY, OPHTHALMOLOGY AND OTOTOLOGY.

ELKS' TEMPLE.

Chairman—H. B. GARNER, Traverse City.
Secretary—J. E. GLEASON, Detroit.

On account of the length of the program, and in order to give every one an opportunity, the fifteen-minute rule will be enforced. Discussions are limited to five minutes.

The Secretary of the Section will collect all papers as soon as read.

First Session, Wednesday, June 24th.

1. THE COUNTRY SURGEON. Chairman's Opening Address.

H. B. GARNER, M. D., Traverse City.

2. DRAINAGE AFTER CHOLECYSTOTOMY.

J. J. REYCRAFT, Petoskey.

The paper will present the indications for drainage in operations upon the gall bladder and ducts. In the author's opinion, many cases now treated by insertion of drainage should be closed at the time of operation.

3. ACUTE PERITONITIS.

W. F. METCALF, M. D., Detroit.

(1) Etiology. (2) Pathology, gross and microscopic features. (3) Differential Diagnosis. (4) Treatment, general and surgical.

4. APPENDICOSTOMY.

J. A. MACMILLAN, M. D., Detroit.

(1) History of the operation. (2) Indications, (a) appendicostomy compared with other operations having same indications, (b) used for mucomembraneous colitis, amoebic dysentery, chronic ulcerative colitis. (3) Technique. (4) Method of obliterating the opening.

5. CHLOROFORM ANAESTHESIA.

R. M. GUBBINS, M. D., Ceresco.

Knowledge of the drug and of the patient; method of administration; method in vogue for determining the degree of anaesthesia; apparatus used defective; new apparatus; dangers, and how to avoid them. Need of investigation of different degrees of anaesthesia on the nervous system, blood, blood pressure, etc. Comfort and safety of the patient, also comfort of the anaesthetist.

6. ACUTE TOXAEMIA FOLLOWING CHLOROFORM ANAESTHESIA.

F. W. HEYSETT, M. D., Freesoil.

Besides toxic defects during anaesthesia, and its action in producing pneumonia and nephritis, chloroform causes fatty degeneration of the liver cells; symptoms of toxæmia; cause of symptoms; predisposing conditions; exciting cause. Report of case of delayed chloroform toxæmia. Conclusions.

7. SOMNOFORM, THE NEW ANAESTHETIC.

G. C. HAFFORD, M. D., Albion.

Somnoform among the new drugs which are worthy; nearly a century since the present anaesthetics were discovered; advancement along this line not as rapid as along others; history; composition compared with other anaesthetics; differences from ethyl chloride; death statistics; experiments showing its action; method of use; need of experience before condemning; record of cases.

Papers 5, 6 and 7 will be discussed together.

Adjournment at 4 P. M. to Boat Ride.

Second Session, Thursday, June 25th.

8:30 A. M.

1. Lantern Slide Demonstration of Some Newer Anatomical and Pathological Conditions Which Have Revolutionized Rhinology.

E. J. BERNSTEIN, M. D., Kalamazoo.

Rhinology of today differs from rhinology of fifteen years ago, as does treatment of diphtheria in like periods. This is due entirely to closer study of embryology and anatomy, both normal and pathological. Relation of adenoids to development of the face. Their relation to deformities of the mouth and septum. Septal deflections due to adenoids more than to trauma. Relation of lymphatic system of upper respiratory tract to meningeal. Study of abnormalities of accessory sinuses. In majority of exanthemata sinuses are acutely involved. 95 per cent recover spontaneously. Mainly where some abnormality exists that nature cannot take care of infection. Maxillary antrum trouble due to carious teeth in minority; lantern slide demonstrations of such cases. Relation of headache, blindness, toxæmia to nasal troubles; inutility of old routine spray method in treating these conditions.

2. A Preliminary Report Upon the Use of the Tubercle Residue of V. C. Vaughan in Surgical Tuberculosis.

J. W. VAUGHAN, M. D., Detroit.

The application of bacterial products. The preparation of the non-toxic residue. Report of cases. Conclusions.

3. Report of a Case of Successful Removal of an Esophageal Diverticulum.

H. O. WALKER, M. D., Detroit.

4. Nerve Involvement Following Fractures.

C. S. OAKMAN, M. D., Detroit.

Frequency and mode of occurrence. Immediate and secondary involvement. Symptoms, signs and methods of diagnosis. Prognosis, immediate and remote. Treatment, prophylactic, palliative, surgical and non-surgical.

5. A Bloodless Operation for Hemorrhoides.

L. J. HIRSCHMAN, M. D., Detroit.

A brief description of a simplified operation for internal hemorrhoides, which is applicable either under local or general anaesthesia. The hemorrhage incident to the ordinary rectal operations is prevented, which makes this method especially suited for patients suffering from anaemia, tuberculosis, or other wasting diseases.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.

1. Cyclodialysis Versus Iridodialysis.

P. J. LIVINGSTONE, M. D., Detroit.

Review of etiology and pathology of glaucoma. Reference to results of iridectomy and iridodialysis, for relief of intraocular tension. Reference to cyclodialysis as a simplified operation for relief of intraocular tension. Report of cases.

2. Resections of Intestines.

MAX BALLIN, M. D., Detroit.

Resections in cases of (a) strangulated hernia, (b) malformations (Meckel's Diverticulum, persisting omphalo-mesenteric duct), (c) stricture or complete obstruction of the intestines, caused by ulcers, adhesions, volvulus, intussusceptions, (d) tumors.

3. Personal Experience With Prostatitis.

F. W. ROBBINS, M. D., Detroit.

The great majority of cases are symptomless. A certain small proportions show nervous symptoms very much exaggerated. When to suspect prostatitis, and how to prove it. Should one be optimistic or pessimistic regarding prognosis. Results of treatment depend upon attitude of surgeon to previous question. A plea for judicious conservatism in prognosis and patient well directed treatment.

4. The Neisser or Gonococcus Vaccine in Affections of the Genito-Urinary Tract, the Result of Gonococcus Infection.

N. E. ARONSTAM, M. D., Detroit.

Usefulness of vaccine in acute stages. In chronic conditions not so reliable, because of mixed infection. Should be combined in these cases with staphylococcic vaccines. Importance as a diagnostic agent in latent gonorrhea; action of vaccine in these cases. Statistics of cases. Future possibilities of vaccines in general and of Neisser in particular. Conclusions.

5. Foreign Body Cystitis.

G. E. POTTER, M. D., Detroit.

Etiology. Report of a case of cystitis of four years' duration in a 12-year-old child. Large phosphate calculus with hair-pin for a nucleus removed from the bladder. Symptomatology; diagnosis. The importance of a thorough physical and instrumental examination, including the use of the cystoscope and roentgen ray. Treatment.

SECTION ON GYNECOLOGY AND OBSTETRICS.

ELKS' TEMPLE.

Chairman—A. N. COLLINS, Detroit.

Secretary—C. G. PARNALL, Jackson.

On account of the length of the program and in order to give every one an opportunity, the fifteen-minute rule will be enforced.

The Secretary of the Session will collect all papers as soon as read.

First Session, Wednesday, June 24th.

1:30 P. M.

1. Conservatism in the Surgery of the Uterine Adnexa for the Preservation of the Possibility of Pregnancy.

G. VAN AMBER BROWN, Detroit.

Abstract. Histological anatomy. Physiological phenomena of the pelvic current and its relation to the mode of pregnancy. Internal and external migration of the ovum. Surgical technic. Influence of posture. Case report.

2. Hydramnios: Its Etiology and Significance.

J. E. DAVIS, Detroit.

3. Dietetics in Gynecology.

J. H. KELLOGG, Battle Creek.

The aim of this paper is to show that not a few of the ailments and distresses of which women complain and for which they seek relief from gynecology are due to a faulty regimen and may be corrected by a proper dietary and restoration of the integrity of the digestive functions. Particular emphasis is laid upon intestinal autointoxication as a factor in producing various functional and organic disorders of the pelvic organs and associated viscera.

4. Report of Cases.

F. B. TIBBALS, Detroit.

Adjournment at 4 P. M. to Boat Ride.

Second Session, Thursday, June 25th.

8:30 A. M.

1. Comforts and Minor Necessities Necessary in Confinement Cases.

C. HOLLISTER JUDD, Detroit.

2. Eclampsia.

EDWIN ELLIOTT, Chesaning.

Abstract. Introductory. Etiology. Report of some cases with treatment and results. Conclusions.

3. A Plea for Early Diagnosis in Carcinoma of the Uterus.

J. H. CARSTENS, Detroit.

4. The Advantages of the Cross Incision in Abdominal Surgery.

ROLLAND PARMETER, Detroit.

Adjournment at 10:45 A. M. to General Session.

Third Session, Thursday, June 25th.

1:30 P. M.

Election of Chairman for 1909.

- 1. A Case of Obstetrics With Sequelae.
W. P. MANTON, Detroit.
- 2. Typhoid Fever as a Complication of Abdominal Operations, Pregnancy, and Puerperium.
REUBEN PETERSON, Ann Arbor.

Abstract.—The paper is based upon two cases where typhoid fever was present after abdominal section, and one case where the same complication occurred after a normal delivery. Such cases are not common and are especially liable to be mistaken for sepsis. Hence they are notably interesting from the standpoint of differential diagnosis.

Symposium on the Toxemias of Pregnancy.

- (a) The Etiology and Pathology of the Various Toxemias.
W. H. MORLEY, Detroit.
- (b) The Treatment Up to the Time Radical Measures Become Necessary.
H. E. RANDALL, Lapeer.
- (c) Radical Treatment. Methods of Emptying the Uterus. Dangers.

To be announced.

These three papers will be short and will serve to introduce the topic for discussion. It is an important one and everyone is urged to come prepared to make a contribution to the discussion.

MISCELLANEOUS.

Headquarters—Dunham House.

Information and Registration, Elks' Temple.

Every member should register on arrival.

All meetings will be held at the Elks' Temple on Central standard time.

Commercial exhibits will be found in the Elks' Temple.

The ballot box for the Presidential election will be found at the registration office. It will close at 11 a. m. Thursday. Only those registered are entitled to vote.

All meetings will be called to order promptly. The program is long. Those who are to read papers should carefully note the time and be present.

On account of the length of the program it is absolutely essential that no paper shall be longer than fifteen minutes. Every one on the program has been sent a personal letter to this effect.

Papers handed in for publication may be any length. Discussions must be limited to five minutes.

Adjournment of the sections must take place promptly at 4 p. m. on Wednesday and 10:45 a. m. on Thursday.

BY-LAWS—CHAPTER III, SECTION 5.

All papers read before the Society shall be its property. Each paper read shall be deposited immediately with the Secretary, but the author may also publish the same in any reputable journal not published in this State, provided the printed article bears the statement that it was 'read before the Michigan State Medical Society.'

HOTELS.

Dunham House (Headquarters)...	\$2.00 to \$2.50
Briny Inn	\$2.00 to \$2.50
Northern	\$1.50
Metropolitan	\$1.00 to \$1.50
Marion	\$1.00 to \$1.50
Pearl	\$1.00 to \$1.50
Hermann House	\$1.00 to \$1.50

LOCAL COMMITTEES.

Committee on Arrangements.

James A. King, Chairman	
A. A. McLarty	J. A. Christenson
H. D. Robinson	G. F. Knowles

Committee on Information and Accommodation.

Dr. J. A. King	Dr. H. D. Robinson
Dr. F. G. Knowles	Dr. A. A. McLarty
	Dr. J. A. Christenson

Committee on Reception at Trains.

Dr. J. A. King	Dr. W. K. Branch
Dr. J. A. Christenson	Dr. J. E. Poutre
Dr. W. H. Steele	Dr. A. S. Payne
Dr. Harlan MacMullen	Dr. J. B. Ewers
Dr. R. F. Foster	Dr. C. A. Norconk

Committee on Entertainment of Visiting Ladies.

The Lake Side Club of Manistee	
Committee on Printing.	
Dr. Harlan MacMullen	Dr. P. C. Jensen
	Dr. A. S. Payne

Committee on Exhibits.

Dr. L. S. Ramsdell	Dr. J. B. Ewers
	Dr. L. Szadrawski

Committee on Wednesday Evening Entertainment.

Dr. A. S. Payne	Dr. W. K. Branch.
Dr. Emma J. West	Dr. Harlan MacMullen
Dr. L. S. Ramsdell	Dr. A. A. McLarty
Dr. J. A. Christenson	Dr. F. G. Knowles
	Dr. E. S. Ellis

Committee on Reception at Hall.

All the members of the Manistee County Medical Society

COUNTY	DELEGATE	ALTERNATE
Antrim.....	J. C. Gauntlett, Elk Rapids.....	
Barry.....	J. G. McGuffin, Hastings.....	A. I. Laughlin, Woodbury.
Bay.....	A. W. Herrick, Bay City.....	W. W. Williams, Bay City.
Benzie.....	G. O. Edmunds, Honor.....	E. L. Covey, Honor.
Berrien.....	F. R. Belknap, Benton Harbor.....	R. C. Allen, St. Joseph.
Branch.....	A. G. Holbrook, Coldwater.....	E. E. Hancock, Girard.
Calhoun.....	R. M. Gubbins, Ceresco.....	R. D. Sleight, Battle Creek.
Cass.....	S. K. Knight, Marshall.....	J. L. Ramsdell, Albion.
Chippewa.....	G. J. Dickinson, Sault Ste. Marie.....	J. Rosenthal, Sault Ste. Marie.
Clinton.....	E. S. Martin, Maple Rapids.....	W. H. Gale, St. Johns.
Delta.....	A. F. Snyder, Escanaba.....	H. B. Reynolds, Escanaba.
Dickinson.....	A. M. Darling, Crystal Falls.....	E. P. Lockart, Norway.
Eaton.....	G. B. Allen, Charlotte.....	F. Weaver, Charlotte.
Emmet.....	L. W. Gardner, Harbor Springs.....	G. W. Nihart, Petoskey.
Genesee.....	R. R. Murray, Flint.....	J. C. Wilson, Flint.
Gogebic.....	J. R. Moore, Ironwood.....	G. F. Loope, Bessemer.
Grand Traverse.....	E. B. Miner, Traverse City.....	F. P. Lawton, Traverse City.
Gratiot.....	Stiles Kennedy, St. Louis.....	J. F. Snyder, Alma.
Hillsdale.....	H. C. Miller, Hillsdale.....	D. W. Fenton, Reading.
Houghton.....	W. K. West, Painsdale.....	W. T. S. Gregg, Calumet.
Huron.....	A. E. W. Yale, Bayport.....	J. E. Thompson, Elkton.
Ingham.....	G. B. Wade, Laingsburg.....	L. W. Toles, Lansing.
Ionia.....	C. S. Cope, Ionia.....	J. W. Little, Belding.
Isabella.....	L. B. Dickinson, Shepherd.....	J. F. Adams, Mt. Pleasant.
Jackson.....	M. C. Strong, Jackson.....	J. C. Kugler, Jackson.
Kalamazoo Academy.....	P. T. Butler, Kalamazoo.....	E. J. Bernstein, Kalamazoo.
	J. H. Crosby, Otsego.....	L. H. Stewart, Kalamazoo.
Kent.....	R. W. Luce, Grand Rapids.....	D. R. Meengs, Grand Rapids.
	L. E. Chappelle, Grand Rapids.....	Ralph Apted, Grand Rapids.
Lapeer.....	W. J. Kay, Lapeer.....	Adam Price, Almont.
Lenawee.....	R. M. Eccles, Blissfield.....	I. L. Spalding, Huron.
Livingston.....	Jeanette Brigham, Howell.....	C. B. Erwin, Hartland.
Macomb.....	Wm. Greenshields, Romeo.....	H. T. Berry, Mt. Clemens.
Manistee.....	W. E. Coates, Onkama.....	L. S. Ramsdell, Manistee.
Marquette.....	N. J. Robbins, Negaunee.....	C. J. Larson, Negaunee.
Mason.....	L. H. Duguid, Custer.....	W. H. Taylor, Ludington.
Mecosta.....	J. McNeece, Morley.....	G. McAllister, Stanwood.
Menominee.....	R. O. Walker, Menominee.....	C. R. Elwood, Menominee.
Midland.....		
Monroe.....	C. T. Southworth, Monroe.....	W. F. Acker, Monroe.
Montcalm.....	J. Purdon, Edmore.....	J. O. Nelson, Howard City.
Muskegon.....	G. J. Hartman, Muskegon.....	C. F. Smith, Whitehall.
Newaygo.....		
Oakland.....	J. C. Black, Milford.....	N. I. Baker, Milford.
O. M., C. O., R. O.....	L. A. Harris, Gaylord.....	E. L. Forde, Gaylord.
Oscola.....	E. N. Heysett, Baldwin.....	H. L. Foster, Reed City.
Ottawa.....	H. Kremers, Holland.....	D. G. Cook, Holland.
Presque Isle.....	John Young, Onaway.....	N. C. Monroe, Millersburg.
Saginaw.....	E. E. Curtis, Saginaw.....	J. W. McMeekin, Saginaw.
Sanilac.....	G. S. Tweedy, Sandusky.....	A. W. Truesdale, Shabbona.
Schoolcraft.....	G. M. Livingston, Manistique.....	J. M. Sattler, Manistique.
Shiawassee.....	J. A. Rowley, Durand.....	A. L. Arnold, Owosso.
St. Clair.....	S. K. Smith, Port Huron.....	A. E. Thompson, St. Clair.
St. Joseph.....		
Tri.....	C. E. Miller, Cadillac.....	R. Brodeur, Cadillac.
Tuscola.....	R. M. Olin, Caro.....	W. C. Garvin, Mayville.
Washtenaw.....	Reuben Peterson, Ann Arbor.....	J. A. Wessinger, Ann Arbor.
	J. W. Keating, Ann Arbor.....	Carl D. Camp, Ann Arbor.
	A. P. Biddle, Detroit.....	C. E. Simpson, Detroit.
	F. W. Robbins, Detroit.....	W. D. Tiffin, Detroit.
	G. L. Kiefer, Detroit.....	J. A. Winter, Detroit.
Wayne.....	L. J. Hirschman, Detroit.....	V. C. Vaughan, Jr., Detroit.
	W. C. Stevens, Detroit.....	W. A. Hackett, Detroit.
	J. E. Davis, Detroit.....	J. A. McVeigh, Detroit.
	Florence Huson, Detroit.....	C. G. Anderson, Detroit.
		C. W. Wagner, Detroit.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

The Relation of Diphtheria in the Human to that in the Lower Animals.—SAMBON believes that the membranous disease which has long been known to occur in epidemics in certain lower animals—notably birds, horses and cows—is essentially the same disease as diphtheria in man, and caused by variations of the same bacillus. He suggests that the relation is analogous to that between human, bovine, and avian tuberculosis. He discusses the history of some widespread epidemics among lower animals, particularly those where there was a coincident epidemic among human beings, or where the epidemic among humans was preceded or apparently originated from the epidemic in lower animals. He gives a summary of our rather incomplete knowledge regarding diphtheria in animals, and then discusses at some length the epidemiology of human diphtheria, pointing out its many peculiarities, in geographical distribution, seasonal prevalence, preference for water bodies, spread with the wind, frequency in rural districts, etc., all of which have offered obstacles to explanation, and have led to the popular ideas of spontaneous origin from sewage, relation to rainfall, and other widespread and obstinate beliefs. All these things he thinks are readily explained if one concedes the identity of diphtheria in man and various animals, and its transmissibility from one to the other, and he proceeds to some interesting theories as to various ways in which bacilli might be transferred to man by domestic animals or their products, such as milk and eggs. His idea of the transmission of the disease for long distances by birds of passage, and attempt to identify as diphtheria the plague described in the eleventh chapter of Numbers as following the eating of quail, are certainly ingenious.—*Lancet*, April 18, 1908.

Serum Reaction in Scarlet Fever and Measles.—SCHERESCHEWSKY experimented with scarlet fever and measles patients as to the possibility of obtaining a reaction analogous to that described by Fornet and himself as occurring between the sera of secondary syphilitics and paralytics. The technic followed was substantially

the same as in the syphilis experiments, eight drops of perfectly clear serum from each of two persons being brought together layerwise in a narrow glass tube. The reaction consists in the formation of a ring of precipitate at the line of contact, similar to that obtained in Heller's test. (It is advantageous to dilute one of the sera somewhat with physiological salt solution to alter the specific gravity.) Experiments with about 30 scarlet fever patients, controlled by 25 non-scarlatinous, convinced him that this is a specific reaction, as the serum of patients in the beginning of the disease always reacted with that of convalescents, while either of these sera was neutral to that of normal individuals, or that of patients with other diseases. He does not give any figures as to how long after convalescence the "precipitin" is found in the serum. Serum from a woman convalescent from streptococcus sepsis did not react with the scarlet fever serum. In his experiments with measles patients he obtained a reaction only once, between the sera of patients in the second and third days. This he takes as indicating that the "precipitin" disappears rapidly from the blood in measles.—*Munch. Med. Wochenschr.*, April 14, 1908.

Rectal Administration of Antitoxic Sera.—PARKINSON recalls the fact that it is now over six years since he first published his observations on the effect of administering certain sera by the rectum. He reiterates his belief in the efficacy of the method, and cites observations on upward currents in the intestine as indicating the possibility of the serum being carried to a part whose absorptive power is greater, as well as the recently published reports of Calmette, Breton, Forrario, and others, showing that tuberculin, tetanus antitoxin, and plague toxin are readily absorbed by the rectal mucous membrane. He apparently does not recommend rectal administration of diphtheria antitoxin in severe cases, because the absorption is probably slower than in the hypodermic method, but cites a case, where, owing to objection to the use of the needle, he resorted to the rectal method with good results.—*Lancet*, May 2, 1908.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Nitroglycerine in the Treatment of Neuritis.

—STEVENS ON speaks of the excellent results he has obtained by the use of nitroglycerine in the treatment of neuritis. His attention was first attracted to this subject by Krouss, of Buffalo, who reported wonderful results by the use of nitroglycerine.

The cases were as follows:

One brachial plexus unilateral, one bilateral involvement of the radial nerve, one unilateral sciatic nerve affected, and three involving the nerves of the face. There are seven cases termed chronic, distributed as follows: Four cases involved the sciatic and lumbar plexus, two the sciatic alone, and one a bilateral involvement of the brachial plexus.

The etiology was more or less clear in this group of cases. Fifteen were the result of grippe. One followed an attack of typhoid fever, and five were put down to exposure. Of the subacute cases three were neglected acute cases due to influenza, two were diabetic in origin, and in one case the causative factor was obscure. Of the seven chronic cases five had passed through the preceding phases of the disease without relief when he saw them. Two were neglected grippe sequelæ; gonorrhea was supposed to be the cause of two of this group. He did not include cases of neuritis due to pressure or injury in this group, as the treatment of such conditions is obvious.

Nitroglycerine was administered to all these patients in the following routine manner: Beginning with grain 1-100 every eight hours the interval was reduced one hour in every twenty-four until the full physiological action of the drug was manifest or the patient was taking grain 1-100 every three hours, at which interval it was continued. The disagreeable flushing and headache were controlled by small doses of sodium bromide. When an idiosyncrasy was marked the interval between the doses was lengthened.

The effect of the treatment was marked in the acute cases within the first forty-eight hours. All of the twenty-one cases were discharged within one week, and some a few days before. The subacute cases responded rather more slowly, but were all cured within two weeks. The two diabetic cases in this group responded to the treatment in a few days, but returned in the course of several weeks after withdrawal of the drug. They, however, responded to the treatment when readministered. A marked diminution of the quantity of urine and sugar voided was noticed

when the drug was used. The results in the chronic cases were not so brilliant. The condition was, however, improved in all. Three patients were discharged in three weeks, two in one month; one was greatly improved in three weeks, but disappeared from observation. One became discouraged, while improving slowly, at the end of three weeks, and quit the treatment.

In the treatment of the chronic cases ammonium and potassium iodide were given in progressively increasing doses. It seemed to hasten the action of the nitroglycerine. The actual cautery was also employed over the course of the nerve affected. Appropriate treatment for associated conditions was instituted when indicated.—*Medical Record*, May 16, 1908.

Pernicious Vomiting of Pregnancy.—J.

WHITTREDGE WILLIAMS declares that a treatment in a given case of vomiting in pregnancy should depend on the variety with which one has to deal. Any existing abnormality of the generative tract or ovum should be remedied as far as possible. In the case of hydramnios or hydatidiform mole pregnancy should be promptly terminated. If the vomiting is of the toxemic variety abortion should be induced. After the uterus has been emptied, the patient should be given abundant saline injections by the rectum or subcutaneously if the former are not well borne. The stomach should be washed out occasionally by a weak solution of sodium bicarbonate if vomiting is persistent. The patient should not be fed by mouth. Even ice should be withheld until the vomiting ceases. Reliance should be placed upon the salt infusion and enemata and the use of rectal feeding. In neurotic cases a vigorous moral lecture may prove all that is necessary. In other instances of this kind the patient should be told that her condition will not have a fatal termination. Some harmless remedy should be given with the most minute instructions concerning the character of the food and the manner in which it should be taken. If suitable treatment is not followed by improvement within three or four days, the patient should be removed to a hospital for a rigorous rest cure. The majority of the patients, however, do not demand drastic measures, but begin to improve within a week. The writer believes that the induction of abortion will become necessary less and less frequently, being reserved finally almost entirely for the cases of toxemic vomiting.—*Am. Jour. Ob.*, March, 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

The Occurrence of Congenital Adhesions in the Common Iliac Veins, and their Relation to Thrombosis of the Femoral and Iliac Veins.—McMURRICH, in an examination of 107 cases, found adhesions in the iliac vein in 35. The adhesions were within the veins and were of four types. First, a strand-like columnar adhesion, dividing the vessels into two portions for a distance of sometimes six m. m.

Second, a marginal adhesion at the lateral border of the lumen, producing a diminution but not a division of the lumen. Third, a marginal adhesion at the medial border, producing likewise a narrowing, but not a division of the lumen. Fourth, a perforation of the vein, so that it has a true double lumen.

The first two varieties were most frequently met, and the last variety was found only once. In one case a combination of the second and third types was found. A striking feature of the statistics was the preponderance of adhesions in the left iliac vein as compared with the right, 91.4%. Whether the frequency of occurrence differs in the sexes McMURRICH is unable to state, as his examinations included only 17 women. He believes, however, that the presence of these congenital adhesions may be a factor in the occurrence of thrombosis of the femoral and iliac veins, owing to their interference with the blood stream; moreover, it is well known that thrombosis is far more frequent on the left side, as are these adhesions also. The anatomical fact of the right iliac artery crossing the left iliac vein has also a probable influence in determining thrombosis.

The adhesions are believed by the author to be congenital in origin, due to the incomplete disappearance of a loop by which the iliac vein in the embryo originally surrounded an artery, probably the umbilical. This view is strengthened by certain considerations of comparative anatomy. That the pressure of the right iliac artery upon the vein has some influence upon the causation of the adhesions is also probable, especially as the large majority of adhesions occurred at the level of the crossing.

There is a table appended, showing the sex, age, cause of death, type of adhesion, and location, in each instance.—*Am. J. of Med. Sc.*, March, 1908.

Primary Ovarian Pregnancy, with the Report of a Case.—NORRIS and MITCHELL of Philadelphia report an absolutely certain case of ovarian gestation, with detailed pathologic description, gross and microscopic. The condition is rare, or at least, undoubted cases have so seldom been reported that a reliable instance is of great interest. The conditions which must exist, in order for a diagnosis of ovarian pregnancy to be made, are, according to Spiegelberg, as follows:

1. The tube on the affected side must be intact and have no organic connection with the gestation sac.
2. The fetal sac must occupy the position of the ovary.
3. It must be connected with the uterus by the ovarian ligament.
4. Definite ovarian tissue must be found in the sac-wall in several places.

From a search of the literature, the authors have found 16 positive cases, 15 highly probable, and nine fairly probable cases. All of the positive cases were of three months' duration or less. Twelve of the highly probable cases were at term, which is significant as proving the ovary to be much more distensible than the tube. Tubal gestation very rarely reaches full term.—*Surgery, Gynecology, and Obstetrics*, May, 1908.

The Ophthalmo-Tuberculin Reaction; some Observations.—FLOYD and HAWES of Boston, working with out-patients, report the trial of the ophthalmo-tuberculin reaction in 232 cases, of which many were known to be tuberculous, some were doubtful, and a large number were non-tuberculous and normal individuals. The tuberculous subjects included those with pulmonary, joint, glandular, genito-urinary, and ocular lesions. The cases are reported in five groups, as follows: Group 1, 26 persons apparently normal. Group 2, 32 persons with acute diseases other than tuberculosis. Group 3, 43 cases of chronic diseases other than tuberculosis. Group 4, 72 cases of suspected tuberculosis. Group 5, 58 cases of known tuberculosis.

From a study of these groups the authors conclude that the ophthalmic test is valuable for its simplicity, lack of constitutional symptoms, and freedom from danger; that it will not replace, but will greatly assist older methods.—*Bost. Med. and Surg. J.*, Feb., 1908.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

The Pathology of Tuberculosis in Children.

—JOHN McCRAE remarks upon the many conflicting statements regarding pathology. He considers the following groups: First, the small class (1.3%) who in early infancy have intestinal tuberculosis from ingestion. Second, those who store up germs for a longer or a shorter time, and finally suffer from an infection which is generalized. This shows itself in a variety of different forms—bone and joint tuberculosis, lymphatic tuberculosis, and so on, and is apt to end by meningeal tuberculosis or tuberculous bronchopneumonia in a tuberculous lung. Third, those few older children who develop phthisis.

Investigation indicates that of children under five years of age affected by tuberculosis, four-fifths were probably infected by air-borne human bacilli. One-fifth may show the "bovine" form, and this percentage decreases greatly as the age progresses. When infection occurs in a child, the first site of air-borne infection is some part of the lymphoid tissue of the upper air passage or the lungs, and in intestinal infection, the mesenteric nodes.

While familiar with the arguments of Behring and other upholders of milk-borne infection, McCrae thinks we have laid too great stress upon such infection where the bovine disease is prevalent, and have forgotten that the children are more liable to the human form than adults, in that if they do become exposed to a house or other local infection, they spend less time away from their dangerous surroundings than do their adult relations.

In speaking of the other forms of tuberculosis, why in certain cases does the disease manifest itself in bone and joint and remain there, McCrae feels sure this phenomena is some expression of the sum total of lowered bacterial virulence and heightened resistance of an individual tissue. There are many cases of tuberculosis in children that one sees where the lymph nodes seem to be the main seat of the disease, and it has sometimes struck him as possible that, when we speak of "scrofulous diathesis," etc., and malign the resisting power of such a child, we may make a mistake; the concentration of disease in lymph nodes may be but a mark of the tremendous fight the lymphoid tissue is making, and perhaps the universally tuberculous nodes are but another expression for a generalized miliary tuberculosis, but one that has been countered by a better resistance on the part of the child. It is true that by the time the autopsy table is reached the end result is usually the same, but the widespread miliary condition may have been long postponed by this same "tendency to enlarged glands."

Meningeal tuberculosis is a very important sub-

ject, and a very frequent form, but in what a large percentage (80%) of cases it is merely a local evidence of a generalized tuberculosis! It occurs either as secondary to a bronchial or other gland infection without there being disease elsewhere, or as a local manifestation of the disease that exists in many other organs. The latter is more frequent.

Of generalized tuberculosis McCrae's experience has been that the most frequent site of involvement is the lung, which was affected in 95%. In more than half the cases the following organs were affected, in the stated order of frequency: lymph nodes, spleen, liver, intestines, meninges, and kidneys. Tuberculosis in the brain was about one-fourth as frequent as meningeal involvement. Finally the question remains obscure, as to how the bacteria actually pass the surface of the pharynx, bronchus or intestines. Few observers believe that a lesion is necessary. Doubtless some bacteria adhere to fat droplets and are engulfed by unobservant phagocytes; probably small growing colonies on the surface can exert an eroding action on the mucosa by their toxins. It is worth considering if the youthful mononuclears, exalted in number as they are in childhood, are more keen to take up tubercle bacilli than their more fastidious successors.—*Archives of Pediatrics*, Apr., 1908, Pg. 277.

Channels of Communication in Tuberculosis: Their Relative Significance.—HAMILL reaches conclusions as follows:

- 1) That it is impossible to gain any knowledge as to the port of entry, either from the location or the degree of development of the tuberculous lesions.
- (2) That fetal infection is proven, but not common.
- (3) That infection through the mouth, tonsils, and pharynx is of frequent occurrence, and may be produced by inhalation or ingestion.
- (4) That primary inhalation infection through the lungs does not occur.
- (5) That infection through the intestinal tract is definitely proven.
- (6) That the bronchial glands and lungs may be infected through the intestinal tract, as well as through the lower respiratory tract.
- (7) That the relative significance of the various modes of infection is very difficult to determine, on the basis of our present knowledge, since it has been clearly shown that it matters not from what point the tubercle bacillus is introduced, it can eventually reach the bronchial glands and lungs without leaving any evidence of its mode of entrance. HAMILL is inclined to believe that infection by the intestinal tract is more common in infants and children than infection through the lungs.—*Archives of Pediatrics*, April, 1908, pg. 288.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

The Role of the Pneumococcus in Ocular Infections.—Modern bacteriological researches have taught us the fact that the pneumococcus lanceolatus plays an important part in the causation of several diseases of the eye and of its appendages. It has been found in inflammations of the lachrymal gland and sac, of Tenon's capsule, of the connective tissue of the orbit, of the eyelids, of the conjunctiva, of the cornea, and in metastatic forms of panophthalmitis.

It is probable that the pneumococcus in attenuated forms can be found now and then in the healthy conjunctival sac. Inoculations of the human conjunctiva have been made. H. Gifford inoculated his own eye as well as one of his assistants with pus from a case of pneumococcal conjunctivitis with positive results. In addition to this, he obtained a positive result in two patients to whose conjunctival sacs he applied an anaerobic culture of the third generation. Halle relates an interesting experience of a medical man who inoculated his own eye during the performance of a thoracentesis for the relief of a pneumococcal pleurisy, and seven days later developed a pneumococcal conjunctivitis. He also mentioned another case where conjunctivitis followed three days after the entrance into an eye of the saliva and nasal secretion from a child affected with pneumococcal conjunctivitis.

No micro-organism is more important as a causative factor in chronic inflammation of the lachrymal sac than the pneumococcus. Any slight abrasion of the cornea offers opportunity for infection, giving rise to that destructive affection of the eye known as "serpiginous ulcer of the cornea" or "hypopyonkeratitis." It is this fact that causes the ophthalmic surgeon to insist on the cure of catarrhal affection of the lachrymal sac.

"Occasionally in babies, owing to delayed developmental processes, the naso-lachrymal duct, instead of being patent at birth, is more or less closed by mucous folds or filled with inspissated secretion from liquefaction of the epithelial cells, which in fetal life form the rudiment of the lachrymal-nasal duct." Should infection occur either before or after birth, we have a kind of dacryocystitis produced—or an actual lachrymal abscess. In this condition the pneumococcus is often present.

Pneumococcal conjunctivitis may be considered as it affects (1) newly-born babies, and (2) older subjects.

(1) Ophthalmia neonatorum; two-thirds of all cases caused by gonococcus, 10 per cent of all cases due to pneumococcus. The later cases are not so severe, often much improved in four or five days.

(2) In older subjects pneumococcal conjunctivitis may appear under various clinical guises. Usually associated with coryza, the presence of a pellicle of fibrin on the surface of the palpebral conjunctiva or of small multiple ecchymoses into the ocular conjunctiva, and lastly of a floating rose-colored puffiness of the free edge of the eyelids. The microscope is necessary for an accurate diagnosis.

Cornea. The importance of pneumococcal infection of the cornea cannot be overestimated. Serpiginous ulcer is due to pneumococcal infection, according to Römer, in 95 per cent of all cases. According to Professor Laber, in hypopyon-keratitis the pneumococcus, derived either from a diseased lachrymal sac, or conjunctiva, or foreign body, or saliva, gets access to the cornea through some abrasion. Once in the substantia propria, however, the organism spreads and elaborates its toxins. Although Descemet's membrane is germ-proof, yet it appears to oppose no barrier to the diffusion of toxins. The latter are enabled to pass through the membrane and in that way to reach the aqueous humor and the structures in contact with the humor, as the iris. Leucocytes are caused to migrate into the anterior chamber, where they become visible under the guise of a collection of pus (hypopyon). This process explains the fact that pus in the anterior chamber is free from bacteria. The only exception to this rule is to be found in cases where the cornea has already perforated. While very severe in adults, hypopyon-keratitis in children as a rule is a much milder affection, yielding to simple treatment.

Pneumococci are not uncommon in keratomalacia, a kind of gangrene of the cornea apt to supervene in young children much enfeebled by wasting disease.—SYDNEY STEPENSON, *Ophthalmoscope*, March, 1908.

OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

Acute Purulent Otitis Media in Infants and Young Children.—Of 248 cases examined and treated by HER IG in five years in private practice, there originated acute purulent otitis media during simple catarrh in 56 per cent, during measles in 14 per cent, during dentition in 2 per cent, during scarlet fever in 20 per cent, during pertussis in 1.5 per cent, during mumps in 0.5 per cent, and doubtful were 6 per cent. Eighty-nine cases, or 36 per cent, originated from exanthemata; 230 cases, or 93 per cent, had adenoids; forty-eight cases, or 20 per cent, had hypertrophied tonsils; twenty-eight cases, or 11 per cent, had acute coryza, and twelve cases, or 5 per cent, had follicular amygdalitis.

Proportion of symptoms in 248 cases: 1, Rise of temperature was present in 248 cases, or 100 per cent; 2, pain, and 3, tenderness in 114 cases, or 46 per cent; 4, extreme restlessness in 236 cases, or 95 per cent; 5, refusal of the child to rest its head upon the affected side in 125 cases, or 50 per cent; 6, glandular enlargement in 189 cases, or 76 per cent; 7, nasal discharge in 136 cases, or 54 per cent; 8, gastroenteric symptoms in 69 cases, or 28 per cent; and 9, convulsions in 40 cases, or 16 per cent.

In these cases 50 per cent showed the absence of pain or tenderness, which fact proves how uncertain the symptom of pain or tenderness is in infants and young children.

Very frequently a physician examines an ear and finds what appears to him a white membrane, which, if carefully and delicately swabbed, will reveal an angry, red, bulging ear drum.

Subjective symptoms are: 1, Temperature; 2, pain; 3, extreme restlessness; 4, refusal of infant to rest head upon affected side; 5, tenderness; 6, enlargement and tenderness of the glands under the angle of the jaw; 7, a nasal discharge; 8, symptoms of gastroenteritis; and 9, convulsions.

1. The temperature is one of the most reliable and constant symptoms that we have. If, during the convalescence of an infant from one of the infectious fevers, the temperature suddenly rises, examine the ear, and you very frequently find the cause of the trouble here. Also in gastroenteric diseases, when the patient is improving, but the

temperature remains high, examine the ear, and in 95 per cent of the cases you will find an acute otitis media the cause of the temperature.

2. Pain is the most inconstant symptom we have in acute otitis media in infants. Kerley, 1901, reports seventy-seven cases, of which number there was a total absence of pain and tenderness in 69 per cent, and yet these infants all suffered from an acute otitis media. In cases where pain is present it is shown by the short, spasmodic cry of the infant, which is increased by pressure upon the auricle and in the angle of the lower jaw.

3. Extreme restlessness is a very constant symptom in infants, being present in over 90 per cent of the cases. In cases of gastroenteritis we often see extreme restlessness as the only symptom of an acute otitis media.

4. Refusal of the child to rest its head on the affected side was brought to notice by Dr. Marsh in 1897. This is not a constant sign, as it only appears in about 50 per cent. of cases.

5. Tenderness upon pressure, already described.

6. Enlargement of the glands under the angle of the jaw is fairly constant, as the author has been able to collect 248 cases in his own experience where the glandular enlargement was present in 189 cases, or 76 per cent.

7. A nasal discharge was present in 136 cases of the 248 cases, or 54 per cent. This discharge is generally of a glairy mucoid character, but oftentimes mucopurulent.

8. Gastroenteric symptoms, such as diarrhea and vomiting occur.

9. Convulsions occur in a small percentage of cases, and take the place of a chill, which we get in older children and adults.

Symptoms in older children are the same as those enumerated for infants, except the element of pain plays a greater role than in infants, and is a far greater constant symptom. Nausea is also a symptom often seen in older children. These children complain frequently of a fullness of the head. Anorexia is present in most of the cases in older children. In older children the gastroenteric symptoms are more marked than in infants. Headaches are also complained of.—*New York Medical Journal*, March 14, 1904.

ACTINO THERAPY.

Conducted by

H. R. VARNEY, M. D.

Treatment of Sycosis by the X-Ray.—The writer, HOWARD FOX, M. D., states that there are a few skin diseases, and only a few, in his opinion, in which the X-Ray is to be preferred to all other therapeutic measures. The X-Ray seems especially indicated in affections where epilation is desired, such as ring-worm, favus, and sycosis. It has certainly proved an exceptionally valuable agent in sycosis, a disease so often intractable to all methods of treatment.

The first cases of sycosis treated by the X-Ray were reported in 1899 by Freund and Schiff. These writers considered that the hairs acted as foreign bodies and that their removal would eliminate the inflammatory process in the follicles. As a matter of fact, they found that after epilation no new pustules appeared. It was also observed that before the hairs fell the acute inflammatory symptoms lessened and the infiltrated areas flattened and disappeared. At the same time the subjective symptoms abated. Their method did not require a dermatitis to produce results. As soon as reaction appeared the treatment was stopped. After 7 to 11 sittings the hairs loosened and fell, and in 10 to 12 days, all redness disappeared.

Since the pioneer work of Freund and Schiff a large number of cases of sycosis have been treated successfully by the X-Ray. Allen, who has treated 23 cases, almost all of long standing, says: "The results have been for the most part prompt and excellent, and in a few astonishing." Pusey says: "From a considerable experience in the treatment of sycosis with Röntgen therapy, I can recommend it strongly. The cases yield much more readily than from any other method." Stern in a recent report says: "The results accomplished in comparison with other methods are simply marvelous. I have repeatedly seen cases of five years' standing, involving almost all the hair follicles of the face, cured in six weeks' treatment. We have treated 105 of these cases, with almost 100 per cent cures."

The management of the cases depends largely upon their chronicity.

In the more acute cases a temporary epilation is alone required. It is always advisable to proceed with caution, as at times an unexpectedly severe dermatitis makes its appearance. In these cases it is important, as Holzknecht and others suggest, to keep the beard closely shaven for a year following X-Ray treatment. In the extremely obstinate and chronic cases it is often necessary that the beard be permanently epilated in order to obtain a lasting cure. Where a chronic rhinitis is

the cause of a sycosis of the upper lip it should receive appropriate treatment. At times permanent epilation is necessary to effect a cure. Schmidt says that in recurring cases of sycosis a long continued intermittent treatment must be given, in which an atrophic condition of the skin and telangiectases are inevitable. Even were this condition inevitable, it would be preferable in many cases to the more disfiguring original disease.

In conclusion he states that for the more acute cases of sycosis the X-Ray is the best therapeutic agent at our command; for the extremely chronic and obstinate cases it is the *only* reliable means of treatment.—HOWARD FOX, M. D., *Medical Review of Reviews*, New York, Feb. 1908.

On the Use of Smaller Doses of the X-Rays in Radio-therapy.—PROFESSOR H. RIEDER believes that in spite of much opposition, the development of radio-therapy during the last few years has made great progress. Indeed, in many fields, it competes with, and in some instances has even superseded, the kindred method of photo-therapy. This is especially so in the treatment of rodent ulcer, lupus, and other diseases of the skin.

Like all other remedial agents, this, the youngest branch of therapeutics, has a long period of development to pass through; and even now, after almost ten years of labor, we are often unable to decide whether any particular disease should, or should not, be subjected to Roentgen radiations. This ignorance, however, does not and should not, withhold us from making full use of this most important remedial agent in all suitable cases.

The experience of the last few years has not only taught us which types of disease are suitable for Roentgen treatment, it has also shown the necessity for carefully measuring and determining the quantity of the dose of rays which is to be given. In all quarters we see that the necessity of avoiding harmful action from the rays has led to a reduction of the original estimate of the required dose. Practically every radiologist has found himself obliged to make concessions in this respect.

In his opinion, it is the minimum and not the maximum dose which is now of the most importance in radio-therapy. The fact that the dose chosen was much too large for the purpose has been one of the chief causes of the untoward results which have now and then occurred.—*Archives of the Roentgen Ray*, Dec. 1907.

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THE DIAGNOSIS OF EXTRA-UTERINE PREGNANCY*

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In presenting the subject of extra-uterine pregnancy for your consideration, it is my desire not so much to present a scientific paper dealing with the debatable histological and pathological conditions leading up to the ectopic implantation of the impregnated ovum, nor yet to consider the many varied, but comparatively rare, conditions which such a pregnancy may assume, but, rather, to call your attention to the common and simple condition so generally met with clinically, and to emphasize the principal points in diagnosis appearing both before and after rupture.

It is a noteworthy, but regrettable, fact that the average text-book article, dealing exhaustively as it must with the rare, as well as with the common, forms of ectopic gestation, and elaborating the diagnostic points of the many and constantly changing conditions which this interesting accident may assume, tends to produce confusion rather than clearness and simplicity.

Both text-book and journal articles lay too much stress on the so-called classical symptoms of rupture—symptoms which all know and for which all are looking, and, because looking for them and exaggerating

the frequency of their occurrence, many are allowing their cases of ruptured extra-uterine gestation to pass undiagnosed.

Practically every practitioner with whom I have discussed the subject of extra-uterine pregnancy, has referred to these classical symptoms of rupture—sudden, extreme pain, shock and collapse.

Gentlemen, if you make a diagnosis of ruptured extra-uterine pregnancy *only* when you have sudden, extreme pain, shock and collapse, you will fail to make a diagnosis in at least four out of five of your cases.

A few years ago it was my good fortune to have the somewhat unique experience of successfully operating upon six cases of ruptured extra-uterine pregnancy within a period of eight weeks. Every one of these women had been under the care of competent, well known practitioners, and yet but one of them was brought to me with a correct diagnosis.

Having previously had a fairly extensive experience in dealing with this not uncommon condition and, naturally, being constantly on the lookout for its occurrence, I had no difficulty, whatever, in making a correct and positive diagnosis in all these cases, and when their attention was called to the history, the symptoms and the physi-

*Read before the Lenawee County Medical Society, March 10, 1908.

cal signs present, every one of these physicians was surprised that he, too, had not interpreted them correctly.

You may marvel as did they, at these failures in diagnosis and naturally ask for the reason. The answer is simple—the absence of those classical symptoms which our text-books have impressed upon us as diagnostic of ruptured extra-uterine pregnancy.

To make a diagnosis of extra-uterine pregnancy, either before or after rupture, as it is found in by far the great majority of cases, one point is absolutely essential—you must have extra-uterine pregnancy constantly in mind when considering all obscure pelvic and abdominal conditions.

The statistics of von Schrenck show a correct diagnosis in but two hundred and twenty-one out of six hundred and ten cases of ruptured extra-uterine pregnancy.

To fully understand why so few cases of this condition are accompanied by the classical symptoms of rupture, one must look to its pathology. In the large proportion of cases the impregnated ovum is implanted in the distal inch or three-fourths of an inch, of the tube. At the end of the fourth week of gestation, this ovum is about three-fourths of an inch by one inch in its diameters. At the end of the eighth week it is about the size of a hen's egg.

In the majority of cases, somewhere between the fourth and eighth week, owing to the overstretching, and possible tearing, of the but poorly distensible tube, one of two things takes place: either the ovum is discharged, more or less completely, through the unclosed *ostium abdominale* of the tube, as a tubal abortion, or the tube ruptures, with or without discharge of the ovum into the peritoneal cavity.

The condition preceding and causing tubal abortion is, generally speaking, hemorrhage into the ovum, transforming it into a tubal mole, and into the tube between the ovum and the uterus. This hemorrhage is caused by tearing of the blood vessels in the wall of the over-distended tube. The

pressure of the blood in the tube between the ovum and the uterus is the active cause of dislodging the ovum and forcing it, more or less completely, from its bed.

This abortion through the open mouth of the tube is accompanied by a varying degree of hemorrhage. If the abortion be complete, so that the tube is thoroughly emptied, the torn blood vessels soon retract and hemorrhage ceases. In such a case but a few ounces of blood may escape into the peritoneal cavity, occasioning but slight, if any, pain, and neither shock nor collapse.

If, however, the ovum is detached from the tube only enough to allow the blood imprisoned back of it to escape, we may have many repeated hemorrhages, which may be either slight or severe. If the hemorrhages be slight, even if frequently repeated, no one hemorrhage may produce either extreme pain, nor shock, nor collapse.

In certain cases, however, of incomplete tubal abortion, hemorrhage may be profuse and even fatal. It is these sudden, profuse hemorrhages which produce the classical symptoms. Between these two extremes are cases presenting symptoms widely varying in their intensity.

The question of operative interference in free or recurring hemorrhage from tubal abortion, and from rupture of the tube, has been absolutely settled, but that of non-recurring, circumscribed hemorrhage is still open. It can not be denied that in some cases absorption ultimately takes place and the patient regains her health. The period of convalescence is, however, frequently tedious, stormy and dangerous. At best, a diseased tube and dense adhesions between the pelvic and abdominal organs remain to menace the woman the remainder of her life. If the blood be not absorbed, suppuration may occur, and this complication, although comparatively infrequent, must be looked upon as one which threatens every intra-peritoneal collection of blood. When suppuration takes place operation is inevitable, and must be done under comparatively unfavorable circumstances.

I can not but feel, that for the immediate, as well as for the ultimate, safety and comfort of the patient, operation should be instituted in practically every case of intra-peritoneal hemorrhage, be it circumscribed or free, recurrent or non-recurrent.

I admit that in the strict observance of this rule an occasional operation may be performed when not absolutely demanded as a life-saving measure. However, a seemingly unnecessary operation resulting from a too assiduous application of this rule is far better than the loss of even a single life from a supinely temporizing policy. Furthermore, the morbidity attendant upon any condition must be accorded its due weight when considering the advisability of its surgical removal.

When the tube ruptures, whether accompanied by complete or incomplete extrusion of the ovum from its bed, the hemorrhage at the time of rupture may be either slight or severe. If slight, the symptoms will, naturally, be correspondingly slight, while if severe the symptoms also will be severe.

In many cases, the first hemorrhage, or the second, or the third, while causing sufficient symptoms upon which to base a diagnosis and warrant an operation, are not severe. Later, however, a copious, alarming and possibly fatal hemorrhage, caused by either a more complete dislodgment of the ovum, or by a more extensive tearing of the tube, occurs. True it is, that in a certain limited number of cases, the first hemorrhage, be it caused by tubal abortion or by rupture, may be severe, may be fatal. In these pronounced cases, one can scarcely go astray in making a diagnosis, for the extreme symptoms and the readily apparent gravity of the cases, practically force a diagnosis.

Now, if one will constantly have in mind the fact that the milder cases, attended by slight but repeated hemorrhages, are many times more frequent than the severe ones, not much difficulty will be found in promptly recognizing either tubal abortion

or rupture of the tube in an extra-uterine pregnancy.

Arriving at a diagnosis of extra-uterine pregnancy before rupture is closely akin to convicting a man of crime by circumstantial evidence. This evidence, in the way of history and symptoms, when considered as a whole, however, frequently enables one to arrive at a presumptive diagnosis. Add to this the physical signs, obtained upon bimanual examination, and a diagnosis sufficiently positive to warrant an abdominal section is obtained.

As to the history, do not rely too much upon the teaching that extra-uterine pregnancy occurs only in a diseased tube, for, as a matter of fact, many cases of ectopic gestation occur in women who not only do not give a history of preceding tubal disease, but who also have been apparently well up to the time of this misplaced pregnancy.

Extra-uterine pregnancy occurs generally in women under thirty-five years of age, and is frequently a first pregnancy. One of my cases was in an unmarried girl of sixteen. Two others, young and unmarried, believing themselves pregnant, because of a delayed menstrual period following exposure to impregnation, had received uterine sounding and dilatation, in an attempt to produce uterine abortion.

Pain, referred generally to the lower zone of the abdomen, but not localized, or even more distinct upon one side than upon the other, is manifest in the larger number of cases, but may be entirely, and at all times, absent. This pain is never severe prior to rupture or hemorrhage, but is more often described as a peculiar sense of fullness or uneasiness characterized by occasional colic-like pains, mild in severity. As the gestation advances, especially beyond the fourth week, these colicky pains generally become somewhat increased in severity. The increase in pain as the pregnancy advances is undoubtedly frequently caused by slight hemorrhages into, or about, the ovum.

If the ovum is not destroyed before the

fourth week of pregnancy, the menses will not, as a rule, appear. As soon, however, as hemorrhage sufficient to destroy the ovum takes place within the tube, a bloody discharge occurs from the uterus. This is not a true menstruation, but simply a hemorrhage accompanying the shedding of the uterine decidua.

This decidual hemorrhage is frequently of but short duration, lasting for a few days only, while again, provided the ovum is not completely extruded from the tube, it may persist for weeks. Death of the ovum is generally the determining cause of this hemorrhage, but not necessarily, as in some cases fetal life and development continue after complete shedding of the uterine decidua. While uterine hemorrhage is not, as a general thing, severe, yet some few deaths from this cause have been reported.

Bimanual examination prior to rupture will detect some slight enlargement of the uterus, but the size of this organ so varies in different women in health, or because of an old metritis, that this, as a sign of extra-uterine pregnancy, must not be given an unwarranted value.

The important point in this connection is, that, while the uterus in extra-uterine pregnancy will be enlarged, it will still retain the natural non-pregnant form and will not have that characteristic bulging of the anterior wall observed in uterine pregnancy.

A large, slowly healing superficial ulcer of the leg may be due to a thrombosis of one of the small vessels leading to that part. Of course, syphilitic etiology must first be ruled out.—*Am. Jour. Surg.*



If a patient persists in running evening temperatures which cannot be accounted for after a thorough physical examination and blood examination, one

Palpation of the tubes will generally reveal, lying close to one side of, or partially behind the uterus, a soft, semi-elastic, sensitive, generally movable tumor, varying in size from a hickory nut to a hen's egg. This tumor can, as a rule, be differentiated from the ovary.

After hemorrhage has taken place into the ovum and tube, but before escape of the ovum, the tube will, on examination, appear as a sausage-shaped mass, larger and longer than before hemorrhage, more sensitive to pressure and more or less fixed by rapidly formed adhesions.

Vaginal examination in cases of sudden, profuse hemorrhage into the free peritoneal cavity, elicits but little so far as determining the quantity, or even the presence, of blood is concerned. The tube, distended or practically empty, as the case may be, can readily be detected.

When, however, the hemorrhage has been but moderately severe, or there have been repeated slight hemorrhages, the blood, which will have gravitated into Douglas' cul-de-sac and become circumscribed by adhesions between the overlying coils of intestines, the omentum, the uterus and the pelvic walls, will form a distinct, soft, rarely fluctuating tumor, bulging into the posterior vaginal fornix and lifting the uterus forward and upward, against, or even above, the pubic symphysis.

should place the patient on increasing doses of the iodids, for the fever may be due to an old syphilitic infection.—*Am. Jour. Surg.*



Persistent, remittent fever after an acute infection of the knee joint is usually due to a systemic invasion. Such cases are best treated by laying the joint wide open (Mayo operation).—*Am. Jour. Surg.*

THEORY OF THERAPEUTIC INJECTIONS OF FRESH NORMAL SERUM IN ACUTE INFECTIONS.

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Detroit.

Injections of specific anti-serums or a modification of the present method of inoculation with bacterial vaccines are universally looked upon as therapeutic procedures for which the future has much in store.

There yet remains much knowledge to be ascertained concerning these processes, however, and perhaps a greater refinement of technique in regard to the latter before they can be of great service in combatting disease. It is true, I believe, that the employment of bacterial inoculations in acute conditions at least have largely been ineffectual. More ineffectual still have been the so-called specific anti-serums, Flexner's anti-serum for *diplococcus intracellularis* being possibly the only noteworthy exception. Why do they fail to give the looked-for results?

Anti-serums owe their efficiency principally to their lytic or dissolving powers upon organisms of the strain and species against which the animal from which the serum was taken has been immunized. Bacterial vaccines owe any virtue they may have to their power of building up within the inoculated individual opsonins and antibodies of various kinds which eventually cause destruction to the invaders.

To comprehend the manner of this destruction of bacteria demands an understanding of the composition and action of the anti-bodies. The lysins will be considered as an example, for if the recent experimental work of Chapin and Cowie and others upon the composition of opsonins is true, i. e., that there exists a complement and amboceptor factor for each opsonin,

the phenomena of lysis and phagocytosis are not greatly different in their modes of action and may eventually be solved upon similar lines.

When bacteria, dead or alive, are injected subcutaneously in repeated and gradually ascending doses, a progressive immunity against infection by that organism is soon acquired by the *inoculated animal*. Eventually, enormous doses of virulent bacteria can be given without causing infection. A similar immunity results when blood cells of another animal or any other material is injected. The immunity thus obtained results because of the formation of the so-called lysins. By virtue of their presence in the blood stream, the organisms are dissolved when brought in contact with them as sugar is dissolved in water.

It has been determined that two distinct elements are responsible for this lytic action of serum. One is thermolabile, that is, a temperature of 56° C. maintained for ten minutes suffices to destroy it. The other is thermo-stabile, i. e., a temperature of 100° C. does not destroy it. To the first of these factors, the term complement has been given. The heat-resisting element is termed amboceptor or intermediary body because of its ability to unite with complement on the one hand and bacteria on the other. Complement is present in normal serum. Amboceptor is the product of inoculation. As stated in a previous paper,* amboceptors can be detected in the blood of an infected individual very shortly after an infection has begun. As will be shown later, they are present in no small amount.

*Michigan State Medical Journal, March, 1908.

They are not then used up as fast as formed, as would naturally be expected. As the infection progresses, the amount of amboceptors increases steadily until in the midst of the disease they are present in overwhelming numbers. Complement is of course present.

But the infection still continues. Why? With amboceptors in the blood in abundance, why does not lysis of the germs occur and the disease cease? Complement+amboceptor+bacteria should produce solution of the organisms and, consequently, cessation of symptoms.

With the object of determining if possible why, with the above conditions existing, destruction of the germs did not occur, a series of experiments were undertaken which are here briefly recorded.

The constituents of the tests were as follows:

- (1) Serum from a normal individual;
- (2) Serum from patients in various stages of typhoid fever;
- (3) Five per cent suspension of washed human erythrocytes;

(4) Serum of a guinea pig which had been immunized to human blood, and in which the complement had been rendered inactive by heating;

(5) Serum from a patient just recovered from typhoid. The typhoid, normal or post-typhoid serum supplied the complement; the hemolytic serum furnished the hemolytic amboceptors. Complement+blood cells+hemolytic amboceptors should give solution of the blood cells.

(1) .2 cc normal serum+1 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(2) .2 cc. normal serum+1.5 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(3) .2 cc. normal serum+1.75 cc. erythrocytes+.2 cc. hemolytic serum=partial solution.

(4) .2 cc. normal serum+2 cc. erythrocytes+.2 cc. hemolytic serum=very little changed.

(5) .2 cc. typhoid serum+.7 cc. erythrocytes+.2 cc. hemolytic serum=no apparent solution.

(6) .2 cc. typhoid serum+.5 cc. erythrocytes+.2 cc. hemolytic serum=partial solution.

(7) .2 cc. typhoid serum+.25 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(8) .2 cc. post-typhoid serum+.25 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(9) .2 cc. post-typhoid serum+.5 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(10) .2 cc. post-typhoid serum+.7 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(11) .2 cc. post-typhoid serum+1 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(12) .2 cc. post-typhoid serum+1.5 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(13) .2 cc. post-typhoid serum+1.75 cc. erythrocytes+.2 cc. hemolytic serum=partial solution.

(14) .2 cc. post-typhoid serum+2 cc. erythrocytes+.2 cc. hemolytic serum=very little change.

Repeated series of tests were made and the results were inevitably the same. The following conclusions seem justified:

(1) In a given volume of normal serum there are several times as much complement present as is present in a given volume of serum from a typhoid fever patient.

(2) In the serum of a patient recovered from typhoid the amount of complement approximates or equals the amount in normal serum.

To determine what is the relation of the amount of complement in an infected individual to the amount of typhoid amboceptors, the following experiments were made:

(1) .2 cc. typhoid serum+1 cc. typhoid bacilli (two million per cc.)+incubation for one half hour to facilitate combination of complement, typhoid bacilli and typhoid amboceptors+1 cc. erythrocytes+.2 cc. hemolytic serum=no solution.

(2) .2 cc. normal serum+1 cc. erythrocytes+.2 cc. hemolytic serum=complete solution.

(3) .2 cc. typhoid serum+1 cc. bacteria+.5 cc. normal serum+incubation for one half hour+1 cc. erythrocytes+.2 cc. hemolytic serum=no solution.

(4) .2 cc. typhoid serum+1 cc. bacteria+1 cc. normal serum+incubation for one half hour+

1 cc. erythrocytes+.2 cc. hemolytic serum=no solution.

(5) .2 cc. typhoid serum+1 cc. bacteria+1.5 cc. normal serum+incubation for one half hour +1 cc. erythrocytes+.2 cc. hemolytic serum=solution.

We must conclude that in a given volume of typhoid serum the amount of amboceptors is greatly in excess of the amount of complement.

Comparable experiments with regard to pneumococcus, staphylococcus and streptococcus infections have been carried out with similar results.

Reasoning from these facts, it would seem justifiable to suppose:

(1) That the amount of complement in a serum bears some definite relationship to its vulnerability to typhoid infection.

(2) Continuance of infection depends not upon a deficiency of amboceptors but of complement.

(3) That could the amount of complement in a typhoid patient's blood be raised nearly or quite to its normal amount, cure might result.

Careful testing of anti-serums obtained from Parke, Davis & Co. and Frederick Stearns & Co., for the content of complement and amboceptors respectively, disclosed the fact that the amount of complement was uniformly low as compared with the amount of amboceptors, being approximately the amount contained in an indifferent normal serum. If cure depends upon the exhibition of complement, amboceptors being present in the infected individual in plenty, then we have an explanation why such serums are relatively inert. For, in the midst of an infection, anti-bodies can be demonstrated in abundance. With an excess already present, why supply more? The really deficient element is complement. Its content in anti-serums as furnished by the laboratories is not higher than in the normal serums. It may be lower.

The hypothesis, that could the normal amount of complement be furnished an in-

fecting individual, recovery might be expected, was strengthened by a simple experiment performed in vitro. Serum from a patient in the roseolar stage of typhoid was taken and its lytic power on virulent typhoid bacilli tested. .2 CC. of the serum were added to a suspension of 2,000,000 bacilli and the mixture incubated for three-quarters of an hour. The fluid still remained cloudy, showing that little lysis had occurred. A drop of the suspension under the microscope showed the bacilli in clumps but undissolved. 1 CC. of normal serum was now added and the tube again placed in the incubator. After half an hour it was removed. The liquid was perfectly transparent. Examination under the lens showed absence of organisms.

Practical demonstrations of the theory were now attempted by making injections of fresh normal ox serum. Apparently phenomenal reactions to the injections have occurred. The results of such treatment of various diseases with a report of cases will be published at a later date.

The number of cases in which the treatment has been tried are as yet too few to justify any definite conclusions. Suffice it to say that, theoretically, if cure is to be effected in infection by means beyond the efforts of the body cells and fluids of the infected individual himself, it must be by means of increasing his supply of complement. This cannot be accomplished materially by the amount of serum ordinarily used. We are employing doses ranging from 50 to 500 CC., depending upon the general condition of the patient and severity of the reaction as demonstrated by a trial. In addition, the injections must be repeated at frequent intervals, i. e., twice to three times daily, and continued after symptoms have disappeared or until the fluids of the patient himself are supplying the required amount of complement.

That a definite reaction detrimental to the welfare of the invaders occurs when an infected individual receives injections of

normal serum may be inferred from the oscillations of temperature, and the general improvement in the condition of the patient. It can be definitely observed by a test of either the amount of complement in the blood of the patient before and after an injection, and also by the increased phagocytic power of the leucocytes, namely, by the determination of the phagocytic index. By these methods, during a period of varying length, depending upon the size of the dose of injected serum, an increase in the amount of complement and in phagocytosis

can be shown. After an interval of four or five hours, the index drops, but regularly remains higher than it was before the injection. Repetition of the injections results in a gradual ascent of the index with less succeeding fall.

Attempts have been made to extract the complement from large amounts of serum and use it without the necessity of injecting the other contents of the serum, but, as yet, without avail. Fresh normal ox or horse serum has been our only source of supply up to this time.

A NEW APPARATUS FOR THE TREATMENT OF FRACTURE OF THE PATELLA*

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Calumet.

The indications to be met in this injury are the limitation of the effusion, the reduction of the fragments, the maintenance of the reduction until union is satisfactory, and the restoration of normal joint function.

The ideal method of meeting the second of these indications is no doubt suturing of the fragments. This, however, is a very serious operation, as it opens one of the large synovial cavities of the body and exposes it to infection. If sepsis results, the following conditions are imminent,—a stiff joint, amputation at the thigh, and possibly death from septic infection.

It should be undertaken only by surgeons of surgical judgment and skill, and who have at their command skilled assistants and can work under the most rigid aseptic conditions. Unfortunately many cases of fractured patella occur where this skill and the necessary surroundings cannot be obtained. For the purpose of assisting those

practitioners who cannot treat this injury by suturing, I have taken the liberty of showing a splint which has given me excellent results. This apparatus has been evolved from the inclined plane and extension by weight and pulley; but as this confined the patient in an irksome position, I have applied these indications to a wire splint which has as its foundation a Hodgen fracture splint.

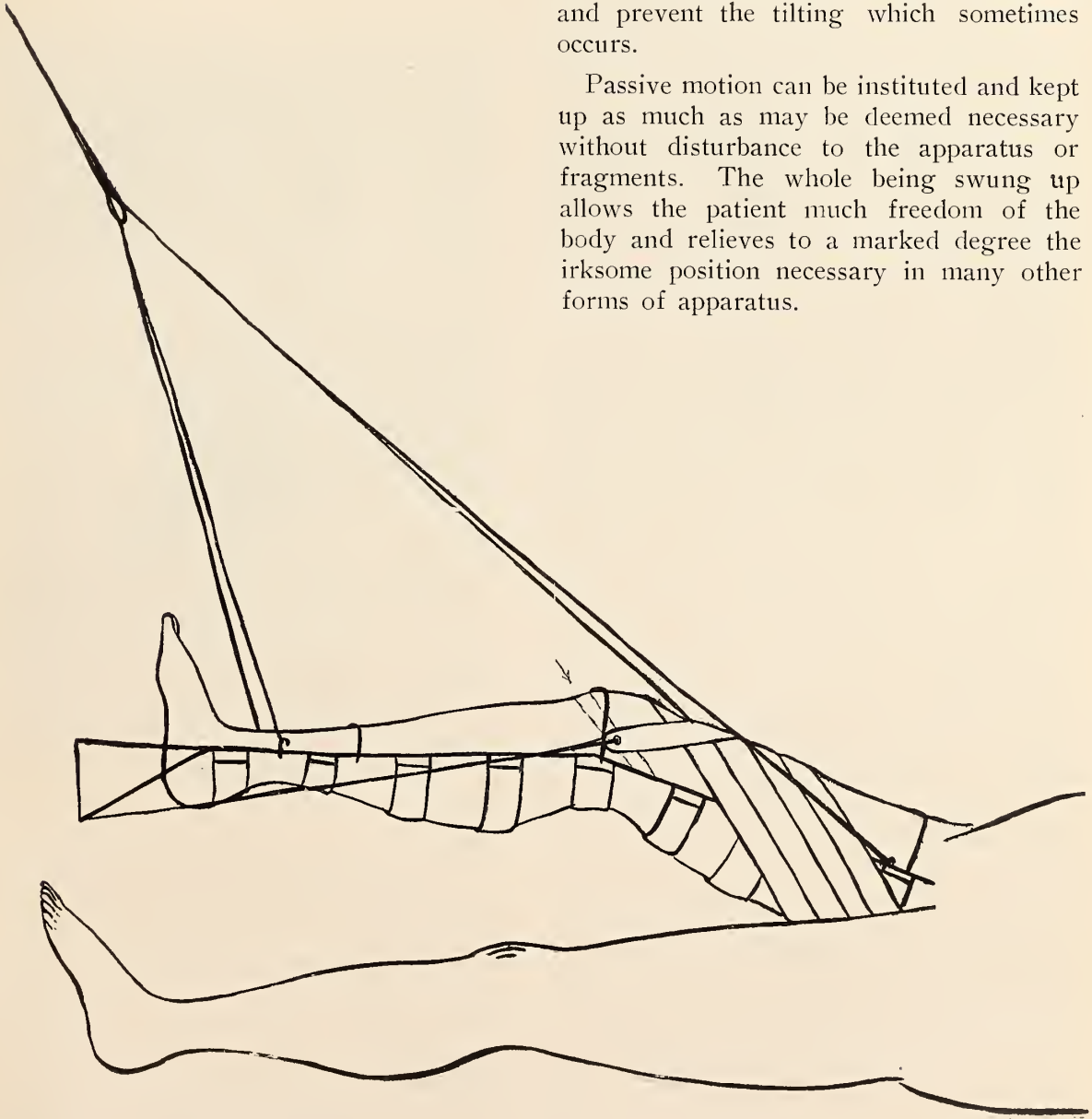
As the separation of the patellar fragments is chiefly due to the contraction of the quadriceps extensor muscle, it becomes necessary to have this relaxed to properly bring the fragments in apposition. To get a fixed point from which to make this traction, adhesive strips 1½ inches wide are used, applied somewhat after the manner of the Indian puzzle. The first strip passes from the inner and upper part of the thigh across the anterior surface to the outer side of knee-joint, leaving an end for the application of a traction cord. The same on outer side of thigh across to inner surface

*Read at the Saginaw meeting of the Michigan State Medical Society, May 15-16, 1907, and approved for publication by the Publication Committee,

of knee-joint. A sufficient number of these strips are used to cover the entire muscle. A traction cord is then fastened to each aggregation of the ends of these strips on the inner and outer sides of the knee-joint. These cords then pass downward at an oblique angle and are fastened to the lower

end of the splint. The whole is then swung by the suspension ropes and the amount of traction adjusted by the angle of suspension from the ceiling of the room. A firm pad just above the upper edge of the upper fragment will materially assist in keeping this fragment in position and give an additional point for the better traction. The lower fragment is held in position by means of adhesive strips pulling it upward and prevent the tilting which sometimes occurs.

Passive motion can be instituted and kept up as much as may be deemed necessary without disturbance to the apparatus or fragments. The whole being swung up allows the patient much freedom of the body and relieves to a marked degree the irksome position necessary in many other forms of apparatus.



REPORT OF A CASE OF SUDDEN DEATH IN AN INFANT HAVING AN ENLARGED THYMUS GLAND WITH THREE LOBES*

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H. A. LUCE, M.D.,
Detroit.

Z. H., aged 12 months, male. Mother had four miscarriages. This was fifth child and only one to come to term. Artificial feeding from birth. At the age of 10 months had two slight convulsions but soon recovered. Four days before coming to the dispensary the child had a slight bowel disturbance for which the mother gave a small dose of castor oil. The next day the child was better, but on the second day following was dumpish and apparently had some pain in the abdomen and had two green stools. Was given a light diet and was brought on the morning of July 31 to St. Mary's Dispensary. The baby cried while in the waiting room and the mother fed it from a bottle containing a thin mixture of soda cracker and water. After emptying the bottle and while lying on its mother's arm the child suddenly began to breathe hard, rolled its eyes up and in about five minutes it was dead. Dr. R. G. Shaw, the assistant director of the dispensary, saw the child just as it was dying and states that it had no convulsion but was cyanosed and evidently struggling for breath. The autopsy was performed about three hours after death. The child was rather poorly nourished, but not extremely emaciated. Upon opening the abdomen the transverse and the descending colon were found greatly distended with gas. The stomach was nearly filled with a finely flocculent fluid, evidently the unchanged contents of the nursing bottle. Otherwise no pathological conditions were found except an enlarged thymus.

The left lobe of the thymus was closely adherent to the pericardium and the right lobe was loosely supported by substernal connective tissue. The middle lobe extended finger-like directly up the front of the trachea and its upper extremity was only 2 centimeters below the lower border of the cricoid cartilage. The gland was carefully removed, weighed and measured at once.

It was triangular, measuring 9 centimeters on two sides and its greatest transverse diameter was 7 centimeters. It weighed $17\frac{1}{2}$ grams. It seemed perfectly possible from the autopsy conditions that the pressure of the upper lobe upon the trachea might have been sufficient to cause death from asphyxia. The intra-thoracic pressure was evidently increased by the greatly distended bowel. When to this was added the 6 ounces of fluid given from the bottle the pressure was of course further increased. It is quite possible that there was also some retraction of the child's head as it lay upon its mother's arm which would assist in completely compressing the trachea.

Microscopical examination of the thymus at the Detroit Clinical Laboratory showed edema of the connective tissue and dilatation of the small vessels.

In order to bring out the possible significance of this case, it may be well to consider the views which have been held concerning the thymus. This gland, which can be removed after birth without apparent effect on the body, is situated in the anterior mediastinum. On opening the thorax of an infant and pulling back the lungs from the median line, one sees this grayish-pink lobulated gland, overlaying the pericardium and the great vessels and often extending up into the neck. In the latter case its finger-like upper extremities lie directly upon the trachea and may reach quite to the isthmus of the thyroid. This was the relation in the case above reported. The size of this gland varies considerably, but after the second year it normally atrophies and the true glandular tissues are replaced by fibrous tissues and fat. By far the most common

*Read before the Wayne County Medical Society, March 9, 1908.

pathological condition of this organ is the persistent hypertrophied thymus. This condition is not infrequently found accompanying exophthalmic goitre. A century ago it was thought that an enlarged thymus gave rise to dyspnea, which was known as thymic asthma. Laryngismus stridulus, which is so frequently the cause of sudden death in infants, was considered to be due

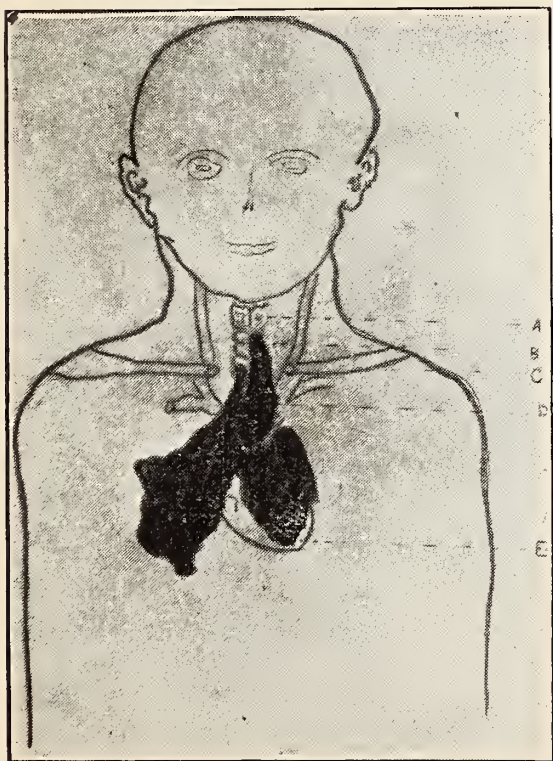
mechanical pressure of the thymus is a myth.

In 1888, however, Jacobi pointed out that while Friedleben's observations were largely correct, there still remained a small group of cases in which thymic enlargement did appear to be the cause of dyspnea and sometimes death. The case reported here, it seems to us, belongs in that small group of cases.

Siegel's case, published in 1896, is an example of this type. A boy two and a half years old had suffered from dyspnea for four or five weeks; there were paroxysmal exacerbations in which the child seemed moribund from asphyxia. No laryngeal obstruction could be found. Tracheotomy failed to give relief until a tube long enough to reach the bifurcation of the trachea was inserted. This gave relief, but could not be worn long because of pressure ulcers. When removed the symptoms returned. The superior mediastinum was now opened and the thymus bulged into the wound. It was drawn out as far as possible and sutured to the fascia over the sternum. The dyspnea was completely and permanently relieved.

The *status lymphaticus* of Paltauf and Escherich is present in many of these cases and statements are even made that thymus enlargement does not exist independently. In this condition death occurs from syncope. In the case here reported, however, no other evidence of the *status lymphaticus* was observed, and the death was accompanied by distinct symptoms of asphyxia and not syncope.

This case, then, seems again to show that there is a small group of cases where death is actually due to pressure of the thymus, increased, perhaps, by other factors. In this case the intrathoracic pressure was increased by a distended stomach and colon, and probably also by bending of the neck.



to a reflex caused by the pressure on the trachea of the enlarged thymus.

In 1858 Friedleben published his elaborate monograph on the thymus, showed that many deaths due to laryngismus stridulus had a normal thymus and announced that there was no such condition as thymic asthma. For thirty years his dictum was largely accepted and the statement still appears in many texts that dyspnea from

ONE CASE OF OTO-ANTRITIS, ONE OF SUB-PERIOSTEAL ABSCESS
IN INFANTS; ONE PSEUDO-CHOLESTEATOMA, ONE OF
EXOSTOSIS, AND ONE OF ARTIFICIAL DRUMMEM-
BRANE IN ADULTS*

EMIL AMBERG, M. D.,
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1. Boy baby S., born April 13th, 1907, was seen by me June 4th, 1907. He was then seven and one-half weeks old. I was told that the right ear started to discharge when the boy was ten days old. There was a very pronounced swelling on the right side of the head caused by a subperiosteal retroauricular abscess. In chloroform-narcosis at the house, I made a simple incision evacuating a large quantity of pus. About three weeks afterwards, in my office, assisted by Drs. McFall and McQuisten, I enlarged in chloroform-narcosis the incision considerably, removed broken-down tissue, and, according to Dr. McFall's statement, some granulations from the antrum. The child made an uneventful recovery. This case is reported on account of the youth of the patient.

2. Baby boy N. S., six and three-quarter months old, was seen by me January 27th, 1908. The right ear was discharging. The left ear showed signs of acute otitis media and the drummembrane was incised by me. The right drummembrane, I learned, ruptured by itself about two weeks previously. There was an edematous swelling behind the right ear. O opened a deep-seated subperiosteal abscess on January 30th in the Woman's Hospital. Dr. Beisman was kind enough to give chloroform; 35 minims in all were required. The Clinical Laboratory reports the presence of staphylococcus aureus. This case is re-

ported on account of the youth of the patient.

3. Mr. Bert R., thirty-four years old, was seen by me October 26th, 1907, having suffered for about a week from severe dizziness and vomiting and making the impression of being very sick. The history of previous and long-continued discharge from his left ear, which still existed, suggested to me a severe affection of the middle ear with possible complications on the part of adjacent structures. Operation was advised but not accepted just then. Patient told me that he had undergone a major operation for ear trouble about ten years ago, which, however, he claims did not stop the discharge. I learned that a mastoid operation had been performed. Upon urgent advice patient at last underwent an operation in Harper Hospital November 8th. The accompanying specimen shows the amount of cholesteatomatous material removed from the mastoid cavity. The greater part of the radical operation which I completed was practically done by nature during the intervening ten years. The retroauricular incision was closed by Michel's clamps, only a small temporary gauze-drain was left in the lower corner. All the dizziness and vomiting disappeared after the operation. The patient left the hospital after ten days and went to work one week after that.

This case is reported in order to demonstrate, first, that the accumulation of cholesteatomatous material in the middle ear, to which the mastoid process belongs, can pro-

*Read before the Wayne County Medical Society, March 9, 1908.

duce symptoms similar to those seen in severe complications extending beyond the middle ear; and secondly, the fact that this kind of chronic middle ear affection is extremely dangerous. The invasion of the cranial cavity was, in my opinion, only a question of time.

4. Mr. S. S., age forty, consulted me on January 3rd on account of pain in his left ear, which he said had lasted for about nine weeks. Examination showed the lumen of the external auditory canal narrowed to about one-half its size by a protrusion from the upper wall about half-way between the orifice and the drummembrane. This protrusion was of hard consistence. Shortly before having been referred to me his physician had very skillfully removed the left tonsil. A suppurating surface was in evidence, especially in the region of the posterior pillar, causing much pain and discomfort. The pain in the ear was considered by me as irradiating from this source. The patient, however, persistently complained of pain not only in his ear but also in his head, so that I, hesitatingly and reluctantly, decided to remove the obstruction, thinking of the possibility that I had perhaps to deal with an osteosarcoma. I was obliged to discontinue the trial to remove the body from the canal in my office on account of pain, and I made the observation that the body appeared somewhat movable. With little enthusiasm, I consented at last that the patient enter the hospital. Existence of the throat affection did not give me a very clear indication to interfere with the exostosis. Furthermore, Politzer states that an exostosis should only be removed if firstly the hearing is diminished to a high degree in consequence of a complete occlusion of the external auditory canal by the exostosis, when at the same time the hearing in the other ear is diminished, and, secondly, if the external auditory canal is inflamed and when at the same time the secretion cannot escape on account of new formation of bone. On January 31st, in ether-narcosis, I detached the auricle,

removed the apparently pedunculated small osseous body which I present to you, and also a little of the posterior osseous canal, made a plastic, kept the flaps in apposition to the wound borders by two catgut sutures and enclosed the first incision by Michel's clamps. The exostosis is of the size of a small pea. The pain in the ear and head disappeared. The throat cleared up under local and general treatment. The existence of a luetic affection could not be established. I may add that we were obliged to discontinue the inunction cure because the following complications appeared: On February 2nd a chill set in, the temperature rose suddenly to 103.8, and the left side of the head became reddened and swollen, showing the picture of a wound infection somewhat resembling erysipelas. Weak creolin dressings in the canal and on the outside made the symptoms disappear after several days, but an affection of the right lower lung accompanied by pleuritis appeared. The possibility of infarct was suggested by Dr. Flintermann. Bloody sputum showed itself for a limited number of days, and later a fluctuating swelling below the right clavicle. A large infraclavicular abscess was opened by Dr. Ballin March 3rd, 1908, and a great quantity of pus was evacuated. The presence of streptococcus is reported. It is not yet clear to me whether the lung affection was due to an infarct, to an ether pneumonia, or to aspiration of some of the material from the surface region where the tonsil had been removed. Pneumococci were present in the sputum, but no tubercle bacilli, as the Detroit Clinical Laboratory reported.

January 27th to 31st the temperature oscillated between about 97 and 101 and 99 and 101. February 2nd it rose to 103.8, February 4th to 103.4, February 5th to 103.4, February 13th it ranged between 102, 103, and sub-normal, being irregular February 14th and 15th between 101 and sub-normal. The patient is improving. The temperature remains about normal in the last few days. The ear has healed since about a week.

This case is reported on account of the dilemma in which we find ourselves sometimes in regard to the differential diagnosis.

5. Mrs. A. M. P., thirty-nine years old, was referred to me on May 31st, 1907, with the history that she suddenly became deaf after cerumen had been removed, which extended to the tympanic cavity. Patient suffered from the grippe in 1903 with offensive discharge from the left ear. She reported that she was very dizzy when the cerumen was removed. Examination revealed the absence of the drummembrane. The head of the stapes was plainly visible. The appearance of the tympanic cavity and the sudden deafness following the removal of cerumen suggested to me the therapeutic measure which consisted in the application of an artificial sound-conducting body to the stapes. I, therefore, placed a small paper disc of about three-eighths of an inch in diameter over the head of the stapes, which I supported in addition by gold leaf of some larger dimensions, with the effect that the hearing power was materially increased, e. g., for the watch from firm contact-audition to one-half of an inch. Ninety-eight, whispered, was heard in a distance of a little over twelve feet.

This very simple procedure finds its parallel in many instances in which an artificial drummembrane might be employed to advantage, e. g., in tension anomalies of the drummembrane, which are very little considered by the medical profession.

A layman, the inventor of an artificial drummembrane which appears to be sold

extensively, told me how he was led to the construction of his device. He was very hard of hearing. While following one day his occupation in a room in which an engine was working, he wrapped a piece of cotton around a small piece of wood in order to cleanse his ear. He had scarcely introduced the plug deep into his ear, when the noise created from the engine became so alarmingly loud to him that he thought an accident had occurred and he shouted to stop the engine. Then he found to his great surprise that the change did not occur without his ear but within the same, and, in good faith, basing on this experience, he constructed an artificial drummembrane of rubber. As we know, artificial drummembranes have been used by otologists in various modifications, for a long time. The physician was of course entirely correct in removing the cerumen in our patient. This cerumen had formed an artificial drummembrane, the absence of which caused the deafness.

This case is reported because it clearly demonstrates that we may reach results by laying proper stress on the sound-conducting mechanism and that we should not neglect therapeutic efforts which not only belong legitimately to the medical profession, but which are very liable to do a great deal of harm to the patient if they are employed injudiciously. If there exists a suppuration in the tympanic cavity, its closure by an artificial drummembrane is apt to prevent drainage and this may be followed by evil consequences.

A NEW DIETETIC AND INJECTION METHOD OF TREATING TY-
PHOID FEVER, WITH A REPORT OF ONE HUNDRED AND
THIRTY-EIGHT CONSECUTIVE CASES SUCCESSFULLY
TREATED IN THE LAST TEN YEARS*

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In bringing this treatment of typhoid fever before the profession it is with the hope that I may be able to prove that the mortality in this dreaded disease may be greatly reduced. My attention was specially drawn to this disease soon after graduating in medicine.

Being appointed A. A. Surgeon in the U. S. Marine Hospital service, I had ample time and opportunity to study typhoid fever, as we usually had from ten to twenty cases in the wards in the hospital. It was here my attention was attracted to the disastrous results following the use of milk as a diet.

In the first autopsies I made on cases where the milk diet had been used, I observed tough, cheesy curds in the intestinal tract, sometimes quite considerable in amount. In one case a long, stringy, tough curd had perforated through the intestine, and other smaller pieces I found in the abdominal cavity. At first I did not attach much importance to this, thinking it merely a coincidence, but on performing other autopsies following typhoid fever I continued to find the same conditions. I came to the conclusion that under certain conditions such curds may readily occur in the intestinal tract of typhoid fever patients and mechanically irritate the raw surfaces over which they pass, increase local inflammation, give rise to decomposition and the resulting gas pressure place the weak surfaces of the ulcerated peyers patches under

great strain, finally causing hemorrhages and perforation. After resigning from the U. S. Marine Hospital Service and entering private practice, I still continued my study of typhoid fever. The first year I practiced, two out of five of my typhoid fever patients died. I concluded that if I were to continue treating such cases according to the method described in the text-books and the instruction I had received during my college and hospital course, the result would be disastrous. This led me to experiment along dietetic and therapeutic lines. It was quite evident to me that the question of diet was equally as important as the question of treatment.

I noticed when treating children with summer diarrhea that shortly after giving them nitrogenous food in the form of milk or beef tea, their temperature would always rise. I found that by giving these children a carbo-hydrate diet in the form of barley or rice water, I rarely had a rise in temperature. With this observation in mind and remembering the results found in my autopsies following typhoid, I came to the conclusion that milk as a diet in typhoid fever should be eliminated. To further strengthen this theory I determined to carefully watch the results following the use of a milk diet and compare them with the results following the use of carbo-hydrate diet in the form of rice or barley water, etc. In eighteen cases I found the temperature rise following the milk diet, while there was no perceptible increase in temperature

*Read at the Saginaw meeting of the Michigan State Medical Society, May 15-16, 1907.

after taking rice or barley water.

I need scarcely add that as a food in typhoid fever I have never since used milk. It is my practice, when I first see a typhoid fever case, to give plenty of sterile water by mouth for five to ten days or until the patient seems to require nourishment, then I use the peptonoids well diluted with sterile water, and the various flavored ices and gelatines. I condemn cow's milk, as it is a culture medium and the cause of a great deal of local irritation.

Nature, as we doctors have reason to believe, is a great teacher, but it remains for us to observe carefully her lessons and apply the result. The appetite is lost in typhoid fever during its entire run. This should teach us not to feed our patients. Again, when we have ignored nature's lesson in this respect, she frequently comes to our aid by causing vomiting or diarrhea as a means of ridding the alimentary canal of the irritating materials. If any further argument against milk is necessary, compare the statistics of the mortality in our own army during the Spanish-American War from typhoid fever, where milk was largely used as a diet, with those of Japan in her recent war with Russia, rice water being the diet used by the Japanese in treating typhoid fever and dysentery. Having eliminated the milk diet with its terrible irritating effects in the already inflamed Peyer's patches, half the battle is won. This brings us to a consideration of the therapeutic aspect of this subject. In taking up the use of carbolic acid as the therapeutic agent in typhoid fever, I at first thought that I had discovered means whereby I could abort the disease. I commenced by giving half-dram doses of carbolic acid in a pint of sterile water as an enema. This I found very severe. The temperature would drop from 104 to sub-normal and the patient showed signs of carbolic acid poisoning. The temperature would run from normal to 100 for a few hours, then resume its course. The kidneys were carefully watched in all these cases, as they are the

filters by which the toxins are eliminated. In my next series of experiments I began with one drop of carbolic acid in a pint of sterile water given as an enema; if the temperature was not reduced, I gave another enema in three hours with two drops, and so on increasing until I gave as high as ten drops or the tolerance of my patient allowed. My next series of experiments was with the drop method of injection. I mixed three to five drops of carbolic acid in a pint of sterile water, placed the solution in a fountain syringe alongside the bed and about a foot above the patient and allowed about one hour for the solution to pass into the rectum. This was regulated by a gauge with a water-glass attachment which shows how fast the water drops. Through the reverse mucous currents this solution is carried throughout the intestinal tract and through this large area of absorption is carried to every tissue in the body.

Dr. Charles Bond, of London, England, has demonstrated how quarts of water can be carried by these reverse mucous currents throughout the intestinal tract. He claims that you can actually drown the patient by this method of enema. It is through these reverse mucous currents this mild carbolic solution is carried throughout the intestinal tract, and that large area of absorption has a wonderful power of destroying toxins in the blood. I do not limit the use of carbolic acid injection to typhoid fever. I have met with phenomenal success with this mode of treatment in reducing temperature in pneumonia and gastritis and have carried cases of acute appendicitis to a sub-acute or the chronic form, thereby lessening the danger from infection at the time of operation. In these 138 cases reported here today the ages ranged from three to seventy-eight years. I gave no cold baths, but applied ice bags over the abdomen, and one bath a day for cleanliness. Occasionally I gave a little strychnine, quinine and salol as indicated. Since adopting this dietetic and carbolic injection method of treating typhoid fever I have treated 138 consecutive cases. This

covers a period of about ten years. All these cases responded readily to treatment, notwithstanding the fact that many were well advanced before treatment was begun. Four cases had had most profuse hemorrhages, all of which subsided when the milk diet was removed. I believe by these experiments I have made some very valuable therapeutic and dietetic discoveries and have sufficient confidence in my treatment that I am compiling a work on the subject.

Typhoid fever has always been one of the scourges of ancient and modern warfare, therefore in peace why not let us prepare

for war, when we see how the British Army lost 7,991 men from typhoid fever in the Boer War, compared with 7,582 men lost in battle, and how the American troops suffered a loss of over 1,500 men from typhoid fever as compared with the small number of 100 killed in battle.

I firmly believe that the above will give food for thought to those whose lives are devoted to internal medicine and that something will be done to stop the terrible ravages of typhoid fever.

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SOME REMARKS ON BILIARY SURGERY*

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To increase the therapeutic efficiency of surgery is the manifest purpose of every member of this society, and in bringing before you the subject of Biliary Surgery, I realize that I shall gain in the course of discussion that will follow my paper much valuable information. For many years it was thought that biliary surgery dealt only with gall stones, but now, under that term, we mean not only the removal of calculi, but the replacement of the gall bladder to its normal position, the drainage of the gall bladder for empyema, the separation of adhesions, which compass angulation of the biliary ducts and interfere with the free movements of blood through the portal vein, drag upon the duodenum to interfere with the passage of the contents of the stomach into the small intestine; and, in fact, accomplish preventive as well as therapeutic meas-

ures in menaced cirrhosis of the liver.

The anatomy of the region concerned in biliary surgery embraces the longitudinal fissure and all the structures entering through it, the fissure of the gall bladder, the transverse fissure, and the lobus quadratus, to say nothing of the abdominal parietes, the peritoneum, the transverse colon, the stomach, the duodenum and the lower margin of the liver.

The pathology upon which biliary surgery may rest involves all the organs more or less which I have mentioned. The ultimate outcome of the morbid processes going on in these organs is the most serious disaster which can possibly assail a sick man. It is most insidious and the signs by which it is indicated are obscure and misleading. Usually it is determined by the general hopeless undermining of the patient's health. There is a history of disturbance of digestion, of pain, of

*Read before the Shiawassee County Medical Society.

This is the last paper written by Dr. Wyman before his death.—Ed.

eructation of gases, of tenderness on pressure in the region of the biliary passages all in endless confusion, with loss of strength, flabby muscles, flabby skin, sometimes jaundice, sometimes diarrhea, sometimes constipation, all combined to make a picture, composite in character, which means that the patient has little hope for restoration of health by any means outside of direct surgical intervention. And what does this surgery do? It removes the calculi in case they are present, it removes the angulation, and twisting of the cystic, hepatic, and common duct, it drains purulent and mucous discharges, it restores the free flow of bile from the liver to the intestine, and it rearranges the channels of the portal vein, and of the duodenum, and of the pancreas so that not only does the blood move freely from the whole digestive tract into the liver, but the pancreatic fluid finds its way unobstructed into the duodenum, the hepatic juices composing the bile find their way into the duodenum, and that organ and the stomach find their motility increased.

How does such a distressful pathology come about? Through impactions originating in the stomach and duodenum, in the bile itself. For long physiologists taught that the bile was an intestinal disinfectant, and it doubtless is, but at the same time it may, under certain conditions, become the most infectious fluid of the animal economy. It must have free access to the intestine, and through the intestine, or vomiting, prostration and death will speedily ensue. It is the main source of the profound intoxication that we find in all cases of obstruction of the bowels high up in the intestinal tract, and so venomous is it under these circumstances that the relief of intestinal obstruction and the release of the dammed back and overflowing biliary secretion is imperative, and must be accomplished at all hazards. In those

cases of obstruction of the bowel the first step in the surgical procedure is to find the point of obstruction and release it or relieve it; and the second is to tap the gall bladder and establish a temporary biliary fistula in those cases in which the causes of the obstruction appear to be due to a general peritonitis. You have doubtless many of you noticed that in nearly all cases of fatal peritonitis in which the inflammatory process had become general, the patient always has a few hours, six to thirty-six, during which the ejecta are brown, dark, and black, a precursor of almost invariable death. For this condition the remedy usually advised—and practiced, sometimes—is the establishment of a fecal fistula. But it is better surgery, founded on a sounder physiology, to make a biliary fistula through the gall bladder at the same time and make sure that the poisonous bile is drained out of the system until the bands or other causes of the intestinal obstruction have disappeared.

The determination or diagnosis of the conditions I have mentioned, which constitute the measurable pathology in all cases is to be found in the careful study of the patient's history, noting previous attacks of intestinal and gastric disturbances. The story of pain in any part of the abdomen, particularly the epigastrium, and in the shoulder, the aspect of the skin, whether clear, tawny, bilious or jaundiced, the loss of weight, of strength, the determination of temperature, the story of previous illness, typhoid, or malaria, or of venereal poisons, the story of miscarriage, of dystocia, of infections, affecting any of the organs in any part of the abdominal cavity; then the history of violence, of blows, of injuries, of displacement, of liver, stomach, transverse colon or kidney, or perforation of the intestine or the appendix vermiformis, a history of dysentery, of intestinal parasites, like the anchylos-

toma, of intestinal worms, and foreign bodies, makes a foundation for a physical examination which is limited to a relatively small area.

Probably the best way to determine the actual condition of organs which may need the therapy of surgery for their relief is by palpation. It is so easy to talk of the "tactus eruditus," the learned touch, that I feel as though I was imposing on your good nature in dragging this time-honored method of diagnosis before you. That a man who thinks with his fingers and feels daily with every opportunity may acquire a sense of touch so skilled that he can detect thickening, displacement, distortion, deep in the recesses of the body, I firmly believe, and cite to you the practice of nearly all of the great clinicians who practice surgery, as we find it today. To explore the biliary tract by the sense of touch, the patient should be first in the horizontal position, one hand of the examiner placed with the fingers upward over the epigastrium and the right rectus abdominis muscle, the other hand, usually the left, under the floating rib; movements of the fingers of the left hand crowding the ribs and the organs resting on them up into the abdominal cavity will be communicated to the right hand fingers pressing over the epigastrium. They will enable the right hand to detect the rise and fall, the normal movement of about one-half inch of the liver, synchronous with respiration. Then sweeping the right hand to the right of the right rectus muscle, the gall bladder, if at all enlarged, will be felt beneath the fingers. If it contains calculi, a grating feeling will sometimes be felt. If it is distended with pus, mucus or blood, its enlargement will be readily noted, and its tenderness appreciated by the delicate resistance of the abdominal muscles. Impairment of the up and down movement of the liver in respiration may be determined

by palpitation, and its significance of inflammatory processes, exudates and adhesions cannot be misinterpreted. These physical facts, which depend on touch and intelligent sensibility on the part of the surgeon, combined with the history of poor health as indicated in the foregoing general remarks, make the foundation upon which the surgical procedure is devised.

Access to this region with the knife may be obtained by an incision commencing in the epigastrium and extending downward obliquely about one inch below the margin of the costal cartilages, a distance of three inches. It divides the rectus muscle, and opens the peritoneal cavity, gives opportunity to introduce the finger above the transverse colon, to explore the gall bladder, and with the cystic duct as a guide, to follow it down to the common duct, the portal vein and the pancreatic ducts. On the right of the exploring finger will be the duodenum and the stomach. On the left will be the liver and gall bladder. Beneath it will be the common ducts, pancreas, portal vein, and beneath them the kidney. Adhesions causing angulation and obstructions can be usually easily swept aside. The gall bladder can be easily dragged into the wound, secured by suture and drained, or in case it is found pendulous, as is often the case, it can be separated from its attachments to the liver and circled by a ligature, and cut away. The small gall bladder, if slightly enlarged, will often be found pendulous, and in need of drainage. It should then be sutured to the upper margin of the wound, so that it would be in the line of natural drainage. The technic in those cases should include a careful suturing of the peritoneum in contact with the gall bladder, when it has been drained, and the careful closing of the fibrous structures and of the muscle and skin by interrupted sutures. Then the patient should be put

to bed comfortably on the right side and the bowels kept open by laxatives or enemata. If these plans are carried out with reasonable dexterity and speed, adhesions obstructing biliary passages and portal vein, or empyema or calculi of the gall bladder need not destroy the patient. If the common duct is obstructed by calculi, they may be sometimes pushed into the intestine, leaving the duct large and patulous, in which case nothing more need be done except to close the abdominal wound; but sometimes the calculi are fixed, and can only be removed by section of the ductus communis cholodochus, and in that case careful suturing is sometimes practised, but it is not necessary; drainage with the small tube of glass or rubber, held

in position opposite the opening in the common duct or hepatic duct by a slight packing of gauze, not large enough to interfere with the channel of the duodenum, will conduct the bile out of the body until the wound heals spontaneously, and the bile again discharges normally into the intestine.

I find in practice, no matter how simple and uneventful the surgery of these cases is, some attention must be given to their rest, diet, drink, air, and occupation, or convalescence will be tedious and relapses occur. A radical change of food, drink, and industry must be insisted upon in all cases, else subtle autoinfection will again load the system with injurious products and retard the cure.

INFANT FEEDING IN GENERAL PRACTICE*

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Pediatrics as a specialty is comparatively of very recent development, and is still, in this country at least, not very clearly differentiated in its scope from that of the internist on the one hand and on the other that of the general practitioner. The present is no place for me to attempt to define the functions of the specialist in this line, but I am stating, I think, a very obvious truth when I say that the greatest field for his activities lies in the scientific management of infant feeding, and that it is just here, too, that he may seem most to encroach upon the domain of the general practitioner, and that their mutual relations are at present most unsatisfactory. For these unsatisfactory relations I can see more than one reason, and I am in

fairness compelled to say that the trouble seems to me to lie largely on the side of the specialty and its followers.

With very few exceptions, the specialist in any line is properly a consultant, and should come into a case only when the general practitioner finds himself in difficulties. The too prevalent tendency of the layman to consult a specialist directly for anything aside from the most ordinary ailment, and a somewhat excessive readiness on the part of the specialist to encourage this practice, is annoying to the general practitioner, and has aroused a certain resentment and distrust against specialism which unquestionably leads many men to hold on to their cases to the last possible minute, and to seek aid perhaps too late. In pediatrics especially I notice what

*Read before the Ann Arbor Medical Club, April 28, 1908.

seems to me an unfortunate tendency on the part of many patients to entrust the entire care of the child to the specialist (real or self-styled) and an acceptance, or even a reaching out after, this kind of practice on the pediatricist's part as his proper and legitimate field, which he would very likely justify by saying that the average general practitioner knows next to nothing of infant feeding; that his inability to handle cow's milk leads him to the employment of the easier but often deleterious proprietary foods; that he seldom calls a consultant until he has got things into a hopeless muddle; and in general that the only way to get any satisfaction out of infant feeding is to have your cases from the start.

Personally I should be very much better satisfied with my own position, and that of the specialty which I have elected, if all of my patients came to me through the family physician, and I could feel that my relations with him were based on a proper degree of mutual respect and confidence; and realizing as I do how much truth there is in the arguments I have quoted, I am led to inquire why it is that infant feeding is so much of a mystery to all but a few of the elect. Is it really so much more difficult to feed the child than to diagnose and treat pneumonia, heart disease, appendicitis, and all the other diseases the physician is daily called upon to handle? It doesn't seem so to me; but if this is not the case, it must be that he is either unwilling to take the trouble to learn, or is badly taught. Probably most practitioners are as willing to be instructed in this as in any other branch, and if they lack instruction one can blame only the specialists, who should be their teachers. Now without in any way assuming to be an authority or a great teacher, and without attempting to condense a textbook into a brief paper, it has seemed

worth while to me to try to simplify somewhat a subject which has become unnecessarily involved and obscure, and to inquire whether there are no general principles by which the ordinary physician may guide himself in the management of those children at least whose nourishment presents no extraordinary difficulties.

Any one who is acquainted with infant feeding as it is practiced in different localities must have been struck by the very wide divergences in the methods followed, and the principles upon which they are based. Indeed, on the continent it seems almost to be taken for granted that every head of a clinic must have a different theory and a different system. When the American, brought up to believe that casein is the *bête noir* of the infant, and that the only sensible and proper way to get around it is by the use of whey and cream, finds Budin using sterilized whole milk; then goes to Heubner and learns that casein, fat, and dilution are of no especial importance, but calories are the thing; then hears from Biedert of the "Schaedliche Nahrungsreste"; from Czerny and Keller of fat diarrhea and fat constipation; finds that a man named Meyer has proved conclusively that the whey is the root of all evil, and then, in Hungary or Holland, discovers that buttermilk is a sure cure for all the ills the child is heir to; he begins to wonder whether anybody really does know anything at all about the subject. One thing is obvious to him, however, after reflection; that is, that these men are all good clinicians, and successful in their work, and as their theories cannot all be right he comes eventually to the rather comforting conclusion that the average healthy child must be able to take care of cow's milk in almost any form. The real skill and success of these men lie, not in their theories, but in their ability to diagnose and handle the source of

trouble in the child that does not flourish on the routine treatment. If we could but know the percentage of these exceptional cases which occur under each method of feeding, we should go far toward settling many vexed questions and might soon find our way toward the uniform and satisfactory system which we still lack. Failing this, it seems to me that the best thing for the general practitioner is to leave the specialist to wrestle with complicated theories of digestion, assimilation and metabolism, and in the light of such facts as are more or less generally agreed on, select some system which is easily understood and put in practice, and easily varied in the individual case, bearing in mind that the real problem and the important thing for him to study is the diagnosis of the trouble when the system goes wrong. From this point of view I wish to make some criticism of current American practice and text-book teaching, with such suggestions as seem to me worth while. Before doing so, however, I wish to remind you that I am speaking simply of the fitness of the methods and ideas I mention for the needs of the general practitioner; and to say, too, that by "current American practice and text-book teaching" I do not mean the best practice of a number of very able and skilled men who are constantly making valuable additions to the literature of this subject in our various journals. I do mean the methods which have a very wide vogue among practitioners in America because of the insistence with which they have been taught by certain well known writers of popular text-books.

Two things especially distinguish American infant feeding from that of Europe—the use of mixtures rich in fat, and the very general adoption of the percentage system, commonly regarded by those who teach it as a triumph of

scientific accuracy in this field. The "milk laboratory" of the cities is a natural outcome of these. I might well add as American peculiarities the lack of any well defined system of estimating the necessary amount of food, the routine use of lime water or other alkali, and the very great lack, at least so far as text-book teaching goes, of anything like regular clinical study of the child's digestive processes by the aid of the stomach tube and the chemical and microscopical study of urine and feces.

The use of whey and cream mixtures, the percentage system, and the milk laboratory have a common origin in the not unnatural idea of changing cow's milk so as to make it as nearly like human milk as possible, coupled with the old idea that the "casein curd" of cow's milk is the chief source of trouble to the infant, and the great thing to avoid. As to making cow's milk like human milk—"humanizing" it, in the English phrase—I wish to say that cow's milk and human milk are entirely different substances, having only a superficial resemblance; that we are constantly discovering new differences between them, and that it is useless to hope to make one like the other. Our problem is not to make human milk out of cow's milk, or anything else, but to find some substitute for human milk that the infant can digest and that satisfies the requirements of its nutrition.

As to the casein curd, and the differences in coagulability and digestibility of human and cow's milk casein, an immense deal has been written and talked about this subject—too often by men who never took the pains to find out whether the "curds" they saw in the stools really were casein at all, and a good deal of ingenuity has been spent in devising ways of preventing their formation. Once scepticism on this point was aroused, it didn't take more careful observers long to discover that

these so-called "curds" nearly always consisted chiefly of fat, and a reaction set in, which has not yet made itself so evident in America, but has led Czerny and Keller practically entirely to ignore any possibility of trouble with the proteids, while Walls claims almost invariable success in feeding children on undiluted fat-free milk. The question is by no means settled, but certainly the tendency of the day, backed by the opinion of practically all the men who have approached the subject from the side of experimental and clinical laboratory work, is to the opinion that far more harm has been done by overfeeding of fats than by the proteids. I can by no means subscribe to the opinion that cow's milk casein is never a source of trouble, and can testify very positively to the occasional, though rare, occurrence, both in vomitus and in the stool, of large, hard, and indigestible masses of unquestionable casein. I have made some attempts to study in the laboratory this question of curd formation, and though my results are very incomplete as yet, I cannot refrain from mentioning them here, because they have brought out some quite elementary facts which were new to me, and which I have failed to find mention of in the literature, possibly because they are so elementary. I undertook this work with the idea that I might find out something regarding the more common fat curds, especially those which consist chiefly of fatty acids, but very quickly found myself side-tracked. The old idea of the action of rennin in cow's milk mixtures was based on the phenomena observed in the test tube when milk and artificial gastric juice were mixed and allowed to remain at rest—a condition not commonly supposed to exist in the stomach—while recently the men who don't believe in the "curds," having adopted the very simple expedient of shaking the tube, have convinced themselves that

troublesome curd formation cannot take place in the presence of the peristaltic motion of the stomach. I was fortunate enough to have at my disposal the apparatus used by Parke, Davis & Co. in their pepsin tests, in which the test bottles, immersed in a water bath at body temperature, are by means of an electrical apparatus subjected to gentle agitation at fifteen-minute intervals. With this apparatus I observed the behavior of various amounts of milk of differing fat content and dilution, when added to solutions of pepsin, hydrochloric acid and rennin in many combinations and strengths, and incidentally the effect of such substances as starch, lime water, soda, salt, and sodium citrate, which are more or less commonly used for a supposed effect upon curd formation. Briefly, I found, besides some other things of no especial interest here, that while I always obtained a firm clot where the mixture was at rest, except in the case of very high acidity, it was wholly impossible to get anything like a curd in the ordinary sense when the bottles were agitated and the amount of hydrochloric acid was anywhere near the normal. In fact, I could see absolutely no difference between the corresponding bottles with or without rennin, while the effect of increased hydrochloric acid was to dissolve more of the precipitate first formed, and, beyond the optimum amount, to delay digestion. When, however, hydrochloric acid was absent or very small in amount, a tough, firm clot holding in its meshes nearly all the fat, was invariably formed, and once formed, was acted upon very slowly by fresh acid and pepsin solution. The clots were larger and more rapidly formed and the digestion slower the more fat the milk contained.

These results recurred regularly under varied experimental conditions, and seem to me to indicate two possible reasons for curd formation, viz: deficiency or

absence of hydrochloric acid at the time the milk enters the stomach; and deficient gastric motility resulting in an incomplete mixture of acid and milk. Further study of this would offer a clinical problem of no little difficulty. I believe deficient motility to be the more probable cause, and think that, sometimes at least, it may result from dilatation following the feeding of too large quantities of dilute milk. If this be true, it is an additional argument for greater concentration. I got little light from these experiments on the common, small fat curds, but am inclined to think that the large hard masses occasionally seen, consisting chiefly of fat, are probably remnants of the mixed clot I have described. However the casein curds may arise, they are not common, nor do I believe it very often possible to demonstrate any great trouble of any kind from cow's milk proteids alone, while fat disturbances are more common the more we look for them. It has occurred to me that under our prevalent system of feeding high proportions of fat there is a possibility of interfering with the acid secretion which seems to be so essential to casein digestion, and in that way giving rise to a proteid indigestion, which can be cured by reducing either fat or proteid. I have, then, little to say for the routine feeding of high fats and low proteids. I feel a good deal of difficulty about criticising an especial pet of the American pediatricist—whey and its various cream mixtures—because it seems rather presumptuous from my comparatively limited experience to throw doubt upon the observations and conclusions of a number of men for whom I have the greatest respect; but I have made faithful trial of whey and whey mixtures, and at the outset with no bias of scepticism, without being able to convince myself that they were of any real general value. Plain whey is a very easily digested, dilute food,

practically free from fat, and leaving little residue for intestinal fermentation, and I can find occasional use for it in introducing a young baby to artificial feeding, and sometimes in other conditions, but while the whey and cream mixtures are well enough borne by the average child, I have found very few cases of difficult feeding in which they were a help.

The routine addition of lime water to the cow's milk mixture was based originally, so far as I can learn, upon an idea that it somehow modified the "curd," making it finer and more flocculent. This idea seems to have been laid aside, and the present excuse for lime water or any other alkali is that human milk is alkaline, therefore cow's milk should be made so. I have said already that these two kinds of milk are essentially different, and cannot be made alike, and I can see no sense in an assumption that because the child's natural food is slightly alkaline everything else that enters its stomach must be made so. The routine addition of alkali could be justified only by definite proof that it really facilitates milk digestion, and there is no such proof. As a matter of fact, it is easy to predict, from elementary chemical considerations, what the effect of lime water must be, and to confirm in the test tube the correctness of the prediction. There is a considerable percentage of free fatty acids in milk, and with these small amounts of lime water unite to form lime soap—insoluble and indigestible. Larger quantities diminish the acidity of the gastric juice, and if enough be present to make the whole mixture alkaline, rennin and pepsin are alike inactive, and the stomach is made more than ever a mere temporary reservoir. Just what the effect of this on intestinal digestion may be I cannot say; but I feel sure that it cannot be especially desirable. I believe that anything whose tendency is

to delay or inhibit the normal processes of gastric digestion—and I class sodium citrate here also—should be used only on very definite indications, and I am quite sure that I have seen intestinal indigestion which had no other cause.

The almost complete disregard in this country of anything like scientific determination of the proper amount of food for the child has always been a mystery to me. Fortunately the last two years have seen a great change in this regard in some of the centers, but it is still true that some of our best known text-books are wholly silent on the subject, and the last edition to one of them devotes a paragraph to a most ludicrous miscalculation of the caloric value of a milk mixture. Doubtless the writers of these books have a way, in their own practice, of determining how much of a given mixture a particular child should have, but their teachings are so very vague that few of their followers acquire definite ideas on the subject, and consequently under and over feeding, especially the latter, are exceedingly common here.

As a final criticism of accepted American teaching, I am going, in this age of scientific medicine, to risk an accusation of encouraging a reversion to less scientific methods by saying that to the average general practitioner, dependent upon home modifications, our beloved percentage system is a stumbling block rather than a help. To the man in the city, who has only to send his prescription to the milk laboratory, it may be well enough, though even there I have various reasons for preferring home modification; and if the specialist wants to think and work in percentages for the sake of greater definiteness and accuracy, certainly it is his business to be as scientific as he can. The calculation of percentage mixtures is not really so very difficult once one has familiarized one-

self with the essentials of the process; neither is it so very simple, and it certainly is troublesome and somewhat formidable to the man who is not constantly doing it. Few trouble themselves to master the complicated looking tables prepared to assist them in these calculations, or to carry around with them a ready made series of calculations like Holt's; and there isn't the slightest necessity that they should. Percentage mixtures may be scientific; the objection I have to them is that they introduce the science into the wrong part of the feeding problem. It is of no real importance to the physician, the parent, or the baby, to know just the exact proportions of each ingredient in the food. The things one should be able to do are: to determine the requisite amount of food; to discover which food principal or principals are at fault in a particular case; and to change the proportions easily and simply. Percentage modification, for home use and for the general practitioner, is not of any help in any of these ways, and to my mind insistence upon it tends to divert attention from the real essentials to a needless complication. More profit is to be derived from the simpler process of calculating caloric values and needs.

Briefly summarized, then, my objections to the feeding method taught in most of our text-books are: that it is founded on theories that cannot be substantiated; that it is cumbersome to apply at a point where it should be simple; and that it is unscientific where science is most needed. Moreover, while I have not the figures I mentioned as desirable as to which of the various systems involves least deviation from the routine process, I feel very sure that of all the methods I have had a chance to watch in their application, the American requires the most variation and involves the most guess-work.

I haven't indulged in such very free criticism of American teachings without intending to mention something that I like better, and here I want to call your attention to the fact that the oldest and easiest of all methods of milk modification—the simple dilution of whole milk with the addition of sugar—is, with minor variations, the one that is still followed and found the most satisfactory by a majority of the real leaders in pediatric practice the world over, and it is especially noteworthy that nearly all of the men who by clinical and experimental laboratory work have made real additions to our knowledge of the digestion and metabolism of the child follow this practice, though the mixtures used are much more concentrated now than formerly. The amounts of fat, proteid, and carbohydrate may be varied quite as easily in this method as in any other, and it is beyond question the simplest one for use away from the milk laboratories. Personally, after some years of fussing with percentages, I have gone back to this as being fully as satisfactory, and much easier for routine work, and I am convinced that it has much more to recommend it to the general practitioner. There can be, of course, no objection to the calculation of percentages in a milk mixture by the man who wants to do it and can, nor should any one make the mistake of supposing that "percentage feeding" means necessarily high fats and low proteids.

If I now proceed to sketch briefly the methods which seem to me most easily managed in general practice, I do not wish to be understood as urging anything new, or original with myself. I have simply selected what seem to me the most sensible and useful points in the teaching of various men; and there are a great many all over the world who, feeling themselves under no special obligation to uphold the tenets of any par-

ticular school or system, are following very much the same plan. The first question to be met is always the choice of the milk. Cow's milk is of course the only thing to be considered in this part of the world. Every one teaches nowadays that mixed milk from the herd should be used in preference to that from the single cow, and that such milk as the Jersey and Guernsey is not so good for the child as the less fancied Holstein or Durham, so that I need not devote more time to these points, except to suggest an expedient which has been at times of service to myself. It occasionally happens that the only clean, reliable supply obtainable comes from a high bred Jersey herd. The chief objection to this milk is that it is very rich in fat, and that the fat globules are unusually large, and separate rapidly from the rest of the milk. I have several times instructed mothers who were obliged to use such milk to let it stand a few hours, until the thickest cream had risen, and then remove the top one or two ounces from the quart bottle, shake the remainder up again, and use it. This isn't strictly scientific so far as knowing the exact composition of the milk you are using, but it works pretty well. It is of course of the greatest importance that the milk be clean, and while it cannot be asked of the average practitioner to determine the number of bacteria, per c. c., it is reasonable to say that he should satisfy himself by personal inspection as to the cleanliness and efficient cooling methods of the dairy whose milk he recommends or uses. In spite of the increasing tendency in this country to the use of raw milk, the need for pasteurization or sterilization is not yet entirely done away with; and while it is well to remember that prolonged use of sterilized milk may occasionally produce scurvy, it is more important not to forget that, especially in summer, the countless bacteria in dirty raw milk may

do more harm in a day than sterilization could in months. Sterilization is still the rule abroad, is certainly the safer plan when there is any doubt regarding cleanliness; and the alterations in the chemical composition of the milk produced by it are probably not of so great importance as has sometimes been supposed. In fact, there is very good ground for believing that heated milk forms a fine, softer curd in the stomach, and is more digestible than raw milk. The most recent work on scurvy tends to discredit the idea that it is a result of using sterilized milk; and while modern discoveries of ferments and protective substances in raw milk indicate theoretical objections to heating, the balance at present seems to incline to sterilization under most conditions.

The nipple through which the child is fed deserves more attention than it usually gets—with regard not to its shape, but to the size of the aperture, which is usually too large, and allows a gulping of the milk that does not favor the proper intimate mixture with the gastric juice. The child ought to take at least ten minutes to empty its bottle, and to get a nipple which accomplishes this means going over the stock, selecting those with the smallest openings, and then, if necessary, enlarging these slightly with a hot fine needle. When, after use, they begin to allow the milk to flow too freely, they must be thrown away. The opening must not, of course, be so small that the baby is discouraged by the labor required to get any milk.

The matter of the proper interval between feedings has for a long time received no especial attention until within a few years Czerny and Keller have taken it up. These men are undoubtedly in some ways extremists, and one would hardly care to follow blindly all their teachings; but, nevertheless, one must admit freely that their absolute independence of tradition, their own studies

of infant digestion and metabolism, and their laborious collection and free criticism of others work in their still unfinished book have been of great service; and that their conclusions are certainly worthy of careful consideration. They argue that even with the normal breast fed baby it requires at least two hours after a meal for the stomach to empty itself; that with artificial feeding the process is slower, requiring $2\frac{1}{2}$ to 3 hours; and that consequently, with the ordinary two hour interval the stomach never has any proper chance for rest. They have accordingly adopted a routine of approximately four hours interval, with a limit of five feedings in 24 hours, and claim that the children are quieter and less fretful, and that there is less temptation to over-feed on account of the apparent hunger that comes from an uncomfortable stomach. They have also broken away from the rule of regularity for the child, which, excellent as it is in many ways, has perhaps been made something of a fad, to the extent of advising that the child's feeding hours be regulated somewhat by appetite and sleep, that it be not wakened for feeding, fed when it doesn't show signs of hunger, nor kept waiting too long when it is obviously hungry. This last seems to be common sense, and I have myself been very favorably impressed with the results of lengthening the feeding interval, though I am not in the habit of going quite so far as they do. I usually order from the start, not more than six feedings in 24 hours, and a minimum interval of three hours, and I am very sure that it is an improvement over the old way. The child who is in the habit of being fed every two hours will go through a day or so of fretfulness in getting readjusted; but will soon settle down, and I think that better sleep almost always follows the change.

As to the amount of food required, it is important to remember that, within

limits, it is not a question of ounces at a feeding, but of the total amount of nourishment received in twenty-four hours, and this amount is to be proportionate, not to the age of the child but to its weight. The only satisfactory method I know of for determining the approximate quantity needed is by estimating the caloric equivalent. Given a mixture the child can digest, in which the proteids are sufficient in amount, to replace tissue waste and provide for nitrogenous growth, the functions of the food principals are very largely interchangeable, so that it is only necessary to provide a total number of calories in a day properly proportioned to the child's weight. A good deal of work has been done in the caloric needs of the healthy child, and we are in possession of data showing pretty well the average requirement, and the variations possible in health. The average is from 40 to 50 c. per pound of body weight per day, and the variations from about 37 to 70. Heubner, who makes more of a point of this than any one else, put his standard for artificial feeding at about 55, which allows for failure to assimilate a considerable percentage; but it is well to remember that this too has been made something of a fad; that the calculation of caloric needs is only approximate, and that its chief value is to prevent gross errors in the line of over or under feeding; the final adjustment being made by observation of appetite, digestion, stools and weight. As under feeding at the start is safer than over-feeding it is well to begin with the lower figures and

work up. The calculations are easily made. Ordinary whole milk contains approximately 20 calories per ounce, the top half of the bottle about 27, the top third about 35, the bottom two-thirds about 12.5, and added sugar 116 c. per ounce. As strict accuracy is not essential, small variations in milk composition need not be taken into account.

I published last year a table of caloric values of common milk mixtures and proprietary foods, designed to facilitate the application of this process to percentage feeding. To come now to the practical application of these principles, I find that a mixture of about one-third milk and two-thirds water, with sugar enough to bring the proportion up to 6 or 7%, is well taken by nearly all children, and I am in the habit of beginning with 6 ounces of whole milk and 1 ounce of sugar in a 20-ounce mixture, with no alkali.* These twenty ounces will contain 120 calories in the milk, and 116 in the sugar, or about 12 calories per ounce; so that in six 4-ounce feedings the child will get about 280 calories. When artificial feeding must be commenced in the first few days of life, I use a greater dilution, and often plain whey, for a few days. This mixture, as I have said, is perfectly well taken by the average child, and the food can be increased gradually until fair stools, reasonable gain in weight, and satisfaction on the child's part indicate that the proper amount has been reached. It is better, so far as possible, to increase the amount of nutriment by making the milk more concentrated, rather than by giving more at a time of the same mixture. As the proportion of milk is increased, the proportion of sugar becomes pretty high and will need to be reduced somewhat, but in any mixture less than half milk, one ounce in twenty can be pretty well given. Once the proper mixture and amount has been found, it is by no means always necessary to keep increasing the amount

*Since this paper was written my attention has been called to Bulletin No. 41 of the U. S. P. H. & M. H. Service on "Milk and Its Relation to Public Health." The articles in this Bulletin form together a text-book of the highest quality on the whole subject of milk and its uses, and the article by Schereschewsky on "Infant Feeding" is especially valuable for its very clear presentation of the principles involved, and the results of recent work. Schereschewsky is an advocate of Budin's method of feeding undiluted milk, which he describes in some detail. There is no denying the success of this method in the hands of Budin and his followers; but I am not as yet prepared to recommend it to the general practitioner because I believe it to be somewhat more difficult to apply successfully than a method of moderate dilution.

with the child's growth. It frequently happens that a baby who started out by taking 50 or 55 calories per pound will continue to gain steadily on the same amount of the same mixture when the caloric quotient has gone down to 40. In such a case the signal for increase is stationary weight. If the mixture I have mentioned is not well taken by a particular child, it is easily varied according to what it is that is not being well digested. The fat is reduced by taking milk from the lower part of the bottle by siphoning—the proteid by taking it from the upper part and using less, as the upper part has a higher caloric value, or by simple dilution. Sugar is, of course, easily changed, but seldom needs it. Changes of a fraction of a per cent of one or the other principal are not, in my opinion, of much use for the general practitioner. One gets more definite results by making a radical change in one direction or another, and then perhaps working back gradually. Small changes are not hard to make, however. If, for instance, on indication of fat indigestion one has resorted to siphoning out the bottom two-thirds of the bottle and after a few days the troublesome symptoms have disappeared, a little more can be siphoned out every day, and the milk used taken from this until a point is reached where everything is satisfactory. There is a good deal that I might say about ways of varying these mixtures if I were trying to write a text-book, but I must proceed to what I have several times said is the most important thing in infant feeding. It makes little difference to me what method or system a man may follow, if only he has some definite idea how to go about it to find out what is wrong when his system doesn't work; and it is just here that most failures occur, because guessing so often takes the place of intelligent study. The most skillful men are reduced to guessing occasionally, and the best is

the one who does the least of it. There are some indications of trouble to be looked for on the part of the stomach. Regurgitation of any considerable amount is usually a result of over-feeding in quantity, while spitting up of small amounts some time after feeding may be an indication of too much fat or too frequent feedings. Real vomiting in a baby usually indicates something more than a simple error in feeding. I am inclined to think that the stomach tube might be used more than it is in studying the child's digestion. I have suggested possible observations on hydrochloric acid and motion; but I refer here to the question of whether the stomach is properly emptied before each feeding; and if not, what the character of the residue is. The tube comes in occasionally, also, in therapeutics, when the stomach has been irritated or dilated by improper feeding. It is exceedingly easy to use in the infant.

The most important indications, however, are to be drawn from the stools, and there is nothing that will help the practitioner in this line of work so much as careful, intelligent study of the infant's feces. I don't mean by this elaborate chemical and bacteriological study, but observation of ordinary macroscopic and microscopic appearances, and such simple chemical tests as the reaction to litmus. Dr. Rich has done a real service by translating Selter's little monograph on this subject, for while Selter has by no means covered the whole ground, and I consider some of his conclusions mistaken, I know of nothing better, and am sure that almost any one will find valuable suggestions in it. I can do no more here than indicate very roughly how to get information from the feces. The normal breast milk stool is slightly acid with a not unpleasant, aromatic odor; the cow's milk stool is normally slightly alkaline, and has a more offensive odor, due to

some proteid putrefaction, and suggesting the odor of the adult's stool. Slight variations in reaction and odor are normal, but distinct alkalinity or strong acidity are pathologic in the breast stool, while distinct acidity or strong alkalinity are pathologic in the cow's milk stool. Cow's milk stools are almost always less frequent than those from breast milk, and increased frequency is a more definite indication of trouble in artificial than in breast feeding. A little practice enables one often to draw valuable conclusions from abnormal odor of the stool. The sharp sour smell of carbohydrate fermentation is, for instance, quite distinct from the rancid odor of the split fats, while putrefaction of nitrogenous matter is readily differentiated from both. It is not, however, to be supposed that putrefaction always means proteid indigestion. It occurs as well with fat over-feeding, especially with the "soap stool," and may indicate only too long a stay in the colon.

The proper color is the well known butter yellow—usually several shades lighter in the cow's milk stool. Starches, malt sugar, etc., give a brown color. Wide variations in color are common. Stools containing an excess of free fat are usually light colored, greasy and soft. Fatty acids and soaps make the stool firmer and give a grayish or dirty white color. The light green, dark green and almost black stools over which mothers are always so excited, usually owe their color to altered bile pigment, though I have seen green stools due to pyocyanin. The precise reason for the appearance of biliverdin is not known, but it usually (not always) occurs in acid stools, and is probably due to abnormal bacterial activity. It is not in itself so serious as it looks and can often be corrected by making the stools alkaline by giving lime water. Excess of casein or overfeeding in general may produce firm, light-colored stools.

In consistency, the stools should be smooth, pasty, and in the young baby not formed. The cow's milk stool is somewhat firmer. The broken, lumpy appearance often seen with small, soft, white or yellow particles, commonly called "curds," is usually due to free fat. Fatty acids and lime soaps give a firmer, more homogenous stool. Real casein curds when present are likely to be rather large, hard, rubbery and somewhat translucent. Thin, watery stools may result from almost any kind of feeding error, but when they appear one may usually conclude that fermentation and intestinal irritation are present. "Foamy" stools commonly come from carbohydrate fermentation. Mucus, normally seen only in the first days, may appear as a result of any irritation. In general, the more formed elements it contains the greater is the disturbance indicated, and the more intimately mixed it is with the stool the higher up in the intestine is its source. Pure mucus, or mucus smeared over the outside of the stool, comes from the colon.

The routine examination of the stool consists in noting the macroscopic appearance of the fresh stool (obtained if necessary by the use of the oiled rod or the soap stick), its amount, consistency, color, odor, and reaction to litmus—all of these preferably with a bit from the interior of the stool rather than from the surface. Then a bit should be rubbed upon a slide with water and examined microscopically. Here one should note free fat, in separate drops or little lakelets, the needle like crystals of free fatty acids, masses of lime soaps, mucus, etc. The masses of undigested casein, once so much talked about, are agreed now by the best observers to be soaps, and it is doubtful whether undigested casein can be identified in the stool except as definite curd lumps.

Any attempt to classify alterations in the stool according to errors in feeding

is made difficult by the fact that a given mistake in feeding may result in one of several abnormalities in the stool; the difference depending usually on whether or not certain bacteria have found intestinal conditions favorable to abnormal activity on their part.

Simple under feeding can usually be diagnosed by stationary or falling weight, with a caloric equivalent under the average, marked hunger often, infrequent small stools, usually soft but sometimes firm and dry from over long stay in the intestines; but with no especial abnormalities. In over-feeding we are likely to get also stationary or falling weight, with caloric equivalent over the average; spitting up of food, occasionally vomiting; spurious hunger resulting from gastric or intestinal discomfort; and often meteorismus. Constipation is the rule here, with what Czerny and Keller describe as the soap stool—dry, firm, gray or dirty white, usually alkaline, with the odor of putrefaction. The constipation is probably due to the dryness resulting from the fact that the lime soaps, of which these stools are largely composed, carry little water. In either under or over feeding eventually bacterial activity may set up a fermentation resulting in diarrhœa, with thin stools, often containing mucus. Excess of fat, or, what is very much the same, inability of the infant to make use of a normal amount, is likely to cause some gastric distress and spitting up of greasy slimy material. The stools, if they contain much free fat, are commonly soft, somewhat lumpy, shiny or greasy in appearance, quite acid in reaction, with a somewhat rancid odor, and are usually, but by no means always, rather small and frequent. Fermentation of any extent causes the appearance of less free fat, more fatty acids, higher acidity, and a more offensive sour smell. There is very likely to be a distinct tendency to diarrhœa, with mucus, and pos-

sibly a green color. The "soap stool" is also common with over-feeding of fat.

Genuine over-feeding with sugar, or intolerance of ordinary amounts, is rare; but fermentative processes may be set up in the intestines in which the sugar is acted upon, in which case we are likely to have flatulence, thin, foamy, acid stools, with a disagreeable sharp smell, and often a green color and mucus. If starch is being added to the milk mixture, undigested particles are easily detected under the microscope by the addition of a little iodine. Starch fermentation gives similar stools to those observed with sugar, in which are often seen large yeast-like cocci, stained by iodine, which some consider diagnostic. Proteid disturbances are not very common, and there is no unanimity of opinion as to their diagnosis. I do not agree on this point with Selter, who, as a pupil of Biedert, is bound to uphold his ideas. It seems to me that the common sign of slight proteid trouble is a rather firm, homogenous stool, somewhat dark in color, rather strongly alkaline, and with a good deal the odor of the adult stool, while if the condition becomes more marked diarrhœa may set in, with thin stools, usually dark and very offensive.

As to the therapeutics of these conditions, and variations and combinations of them that I cannot go into here; one ought always to proceed on a definite plan, making as accurate a diagnosis as possible, and making changes in the food systematically, with a clear reason each time. Often a change in the direction to which suspicion points will clear a doubtful diagnosis. As I said before, more definite and satisfactory results will be obtained by radical rather than by slight changes. If secondary fermentative processes are present, it may be necessary to treat them for a few days like specific intestinal infections, before the indicated change in the food will

have its effect. The bacteria involved often flourish because the reaction of the intestinal contents favors their growth, and it is often useful to change this radically, by feeding buttermilk, lime water, etc.

Constipation, the most troublesome single symptom we have to deal with, deserves a chapter of its own. Here I can only enumerate a few common causes. Under feeding, over feeding, and excess of fat are the commonest, and suggest their own remedies. Sluggish intestinal movements are probable when the amount and character of the food are evidently nearly correct, and the stool when passed seems normal. This suggests massage, and perhaps occasional stimulus to the rectum by the oiled rod or the soap stick. Slight constipation is often made worse by routine use of enemata or glycerine suppositories; and constipation with pain at stool is more often due to very small fissures than the man who doesn't habitually look for them would believe. It is not so very uncommon that, when we have corrected all the faults we can find, the constipation persists. Sometimes we may get help here by substituting some-

thing more laxative, such as maltose (most cheaply obtained as Mellin's Food) or starch and malt extract, as in the well known "malt soup" of Germany, for the milk sugar. If this fails, I have had better luck with the addition of small amounts of milk of magnesia to the bottle than with anything else, and if the feeding is proper, normal movements usually come in time.

I feel that this paper has already drawn itself out to a tedious length, and will close with a brief reference to my introductory topic—the relations between general practitioner and specialist. I believe that these cases belong to the general practitioner as long as he is able to handle them, and that will depend upon the amount of special knowledge of the subject he may have acquired. I have seen some general practitioners more skillful in practical infant feeding than some specialists. A very good rule for any practitioner as to when to call in help is, to make use of all the definite diagnostic and therapeutic knowledge he has, and when he finds himself resorting to guess-work, give it up. The man who has to guess from the beginning would better be in some other business.

PRACTICAL VENEREAL PROPHYLAXIS

Denslow Lewis, of Chicago, believes that the time has come for general instruction of the public as to the rational prophylaxis of venereal disease. Much of this instruction must be given by the physician, and several of the great medical societies have become enough awake to this matter to appoint committees to devise means for this education. Public sentiment must be created which will allow of and demand such instruction in the daily press, which has always refused to consider such articles as publishable. The laws of the United States as to the transmission of obscene literature by the mails are so inexact and contradictory that it is difficult to transmit such information without being arrested and fined as a sender of obscene literature. These laws should be amended so as to make it possible for responsible physicians to transmit and publish such information without danger of being

held responsible to the postoffice authorities. There should be some sort of registration and examination of prostitutes; not the European system of legalization, but such a system as shall oblige the examination of prostitutes by the proper authorities so as to prevent them from propagating venereal disease. We must teach the hygiene of sexual life to children and to parents. Thus abortion, illegitimacy, and infanticide, as well as venereal disease will be limited. Every school should teach it by means of properly instructed teachers or physicians. Prophylaxis in children will be favored by the removal of all sources of irritation about the genitals. The boy and girl as well should know that truth about sexual matters, and not learn it in a garbled way from associates. Women's clubs, secret societies, and gatherings of women are appropriate places for the instruction of parents.—*Medical Record*, October 12, 1907.

The Journal of the Michigan State Medical Society

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JULY

Editorial

The Cancer Problem was the subject of the oration on surgery by Crile at the meeting of the American Medical Association. It was an optimistic contribution, full of encouragement and replete with enthusiasm for an ultimate solution of the problem. It was delivered before what was probably the largest medical audience ever gathered for a purely scientific discussion, and the close attention accorded the speaker indicated the great interest which the profession has in the subject. The gloom which pervades the writings of most authors on cancer was entirely lacking and happily so, for many left the meeting imbued with a desire to study the question more carefully and encouraged by the belief that much progress is after all being made.

We have been led to believe that cancer is greatly on the increase. Statistics gathered at the state institute at Buffalo would seem to show that today carcinoma is five times more frequent than during the middle of the last century.* Crile thinks that the statement is open to criticism, inasmuch as there are several factors which may explain this apparent increase. It may be ac-

counted for by the greater number of correct diagnoses and by the general increase in longevity, due to the fall in mortality from infectious diseases and decrease in infant mortality. On the contrary there are more cases of cancer cured each year. Crile believes, with Bashford and Murray, that absolute statistics on cancer incidence are not now available; whether or not carcinoma is on the increase, the fact remains that the cancer death rate is tremendous. Dührssen says: "More women die annually of cancer in Germany than were men killed in the Franco-Prussian war." Copman says: "Of the people living throughout the civilized world—Europe and North America—who are over thirty-five years of age, one woman in eight and one man in twelve will eventually die of cancer. Last year 7,000 persons died of carcinoma in New York State alone, over half as many as died of tuberculosis. Crile estimates that there are 80,000 cases today in the United States, and possibly 1,000,000 in the world. "Not only," says he, "does cancer destroy countless lives, but it destroys them by a method of merciless torture. To die from an accident or from an acute infection is a matter of days or weeks; to die from cancer is a matter of months or years, and this is a period not alone of suffering, but of suffering without hope—a horrible species of cellular cannibalism."

In this address, Crile had nothing to say about the parasitic theory, but laid considerable stress upon precancerous conditions, i. e., chronic irritation, ulcer, scar, hyperplasia, and innocent tumor. These precancerous conditions are potential cancers. They represent the prophylactic stage of cancer. The profession needs enlightenment upon the importance of these conditions and the laity should be educated as to their meaning.

*Park. Am. Jour. Surgery, May, 1908.

Has the limit of operative measures been reached? Many would answer this question as did Ambrose Paré, in speaking of the control of hemorrhage by the cautery—"this is the keystone of the arch, no further advance can be made." If one were to consider only the operative technic, it would seem that nothing can be added to the Halsted operation for carcinoma of the breast or to the Wertheim operation for cancer of the uterus. Crile has shown, however, that the limit of surgical risk can be widely extended by the direct transfusion of blood, thereby rendering patients fit for operation who would otherwise be hopeless surgical risks. Studies in immunity, recently made, would also tend to show that there are operative possibilities beyond those now generally recognized.

Ehrlich, Loeb, Gaylord and others have demonstrated that an immunity to cancer can be established in animals. Transplantable sarcoma in dogs can be cured by a maximum bleeding and over-transfusion from an immune dog. Crile thus cured nine of eleven dogs and found that those cured became themselves immune. He also has six patients who have been apparently cured of round and spindle cell sarcoma who may be available for immunizing purposes. The idea of thus establishing a group of immunes who will furnish blood for curative purposes is of course somewhat Utopian in its conception, but it is at least suggestive and may prove an immense step forward in extending the limits of operative cure.



The Detroit Society for the Study and Prevention of Tuberculosis rose in a day from a state of impecunious impotence to financial power. This was accomplished by the "Tuberculosis Charity Day" donations, resulting in net receipts of over \$10,900. The "day" was a repetition of similar efforts in

Columbus, Ohio, and in St. Louis, and was under the management of specially chosen women executives, whose enthusiasm and persistence inspired a large force of co-workers. The collections will mean a good beginning of active work against tuberculosis in Detroit. Another year "Tuberculosis Day" will be repeated with far greater success, by utilizing ways and means which were barely thought of this year; it is to be hoped that each succeeding year will see a repetition of this worthy movement and that in proportion as it grows, so may the prevalence of tuberculosis be decreased.

The administration of the fund has been placed in the hands of a large and representative committee, who will ensure confidence and beget interest. Many methods of expending the money have been suggested, but it remains for those who most intimately know the situation to decide upon the wisest method, and several such individuals are upon the committee.

Other local societies in Michigan cities might with profit imitate the work in Detroit. The wheels are easy to set in motion, popular interest is everywhere ready to be aroused, and committees might gain many suggestions from the Detroit workers, who would be only too glad to allow others to gain by their mistakes and their successes.



Heart Block. In every field of scientific endeavor we find an example of the aid that laboratory investigation has been to practical work. None has profited in this manner more than the clinician. As a brilliant example of this in recent years stand the results of the impetus that the modern study of the causes of heart beat has given to the explanation of the Stokes-Adams syndrome. The masterful experiments of His, the remarkable work of Tawara on

the continuity of heart muscle from auricle to ventricle, Erlanger's fascinating demonstrations on the effect of clamping the auriculo-ventricular bundle, Carlson's researches showing the automaticity of heart muscle in lower mammals, and many other notable pieces of work have added proof to the theory first advanced by Gaskell in 1881 and later substantiated in nearly every respect by Engelmann, that heart beat is conducted through the muscular network of the heart. Howell reviewed this whole subject in an excellent manner two years ago.

The production of heart beat and the myogenic theory are closely interwoven with the explanation of heart block or Stokes-Adams disease. This symptom complex was first described in a case of an English revenue officer, 68 years of age. Adams observed this patient in many syncopial attacks during which the pulse fell to about 30 per minute. Nearly twenty years later Stokes (1846) published two cases with pseudo-apoplectic attacks and slow pulse. He noticed during these attacks that the pulsations in the jugular were "more than double the number of the manifest ventricular contractions."

The physiologist has been aware of the existence of heart block in animals for a long time. It has been seen in the exposed heart of many dying animals and could be produced very readily by the destruction of parts of the heart muscle. It was also known that an increased excitability of auricle or irritation of the vagus at times produced this phenomenon.

It remained for His to discover that there existed a distinct muscular connection between the auricle and the ventricle in mammals. He described this connection at first as starting in fine ramifications in the posterior wall of the auricle and extending to the septum. It passes along the auricular ventricular

groove and ends as it begins in branching fibrils that are distributed to the walls of both ventricles. In 1896 His demonstrated at the International Physiological Congress in Bern tracings showing that the effect of the destruction of this remarkable bundle of fibers was independent contractions of the auricle and ventricle. A few years later he had the good fortune to observe a case of heart-block and explained the symptoms upon the basis of the demonstrations he had made in animals.

Erlanger took up the work a few years later and obtained tracings from the auricle and ventricle of a dog's heart in which a clamp had been applied about the bundle of His. He was able by tightening and loosening this clamp to block impulses from the auricle to the ventricle. He could establish various degrees of this block, and, whereas the auricle would beat at a normal rate, the ventricle would assume an independent rhythm of its own. (That heart muscle has this automaticity was first demonstrated by Gaskell in 1883 with the heart of the tortoise. Since that time Engelmann and Ringer have shown that strips of heart muscle, when kept in a normal saline solution, may beat with an independent rhythm for many hours.)

The anatomical study of the bundle of His has been pursued with great care since its earlier description. Tawara, Keith, Wenckebach, and others have followed out numerous dissections. One of the most recent studies on its histology by Lydia M. DeWitt shows it as a finely ramifying structure beginning probably in the sinus, coursing the venous channel through the auricle (right), collecting in a firm band at the auriculo-ventricular septum and dividing again into two branches, one for each ventricle. The fibers again divide and branch out in the musculature of the ventricles.

Since this remarkable research work has been published clinical reports of

cases of heart block have been numerous. In each and every one the attempt has been to show some lesion of the bundle of His. Inflammatory changes, arteriosclerosis, fatty degeneration, and gummatous involvement in some part of its course have been disclosed. In each case of severe heart block the symptoms of epileptiform or apoplectiform seizures followed by cyanosis and unconsciousness with marked bradycardia and rapid jugular pulse, were the prominent features. The attacks may last for a few moments or be prolonged over a variable length of time. Most cases occur in individuals above the age of fifty.

The careful examination of all patients presenting the Stokes-Adams syndrome with the simultaneous tracings of the radial and jugular pulses will assist in verifying the explanations now generally adopted as to the cause of heart-block. They will, in addition, serve to eliminate those cases of slow pulse due to extrasystole and other causes.



The Manistee meeting proved one of the most attractive held within recent years. Especially was this true of the social features. A marked feeling of good fellowship pervaded the meeting and there was not a ripple of dissention to disturb the pleasure of those present. The registration was not large but was up to the expectations of those who had planned the meeting, and there were a number of new faces present. The weather was ideal, the bracing air of Lake Michigan acting like a tonic on those who were fatigued by the excessive heat prevailing over the southern part of the state during the week previous to the meeting. The boat ride, barbecue, dance and the Thursday reception were unusually attractive and much enjoyed by all who were fortunate enough to attend.

The section work was marred by the failure of a number of essayists to appear. There were quite a number who could not get places on the program this year. To have twelve members out of forty-five on the program fail to appear is discouraging.

The addresses by Dr. Patrick, of Chicago, and Dr. Bloodgood, of Baltimore, were inspiring and were enthusiastically received.

Our newly elected president, Dr. A. I. Lawbaugh, of Calumet, is well known throughout the state and particularly throughout the upper peninsula.

A full report of the meeting will appear in the August issue.

The following members registered. (Names appearing in italics were delegates.)

Antrim: *J. C. Gauntlett.*

Berrien: *F. R. Belknap*, E. J. Witt, W. L. Wilson.

Bay: A. Stealey.

Benzie: E. J. C. Ellis, *G. O. Edmund*, E. L. Covy, C. P. Doyle, M. Frankfort.

Calumet: *S. S. Lee.*

Chippewa: *G. J. Dickison*, C. J. Ennis, E. H. Webster.

Calhoun: A. W. Alvord, W. Haughey, W. H. Haughey, J. F. Morse, *R. M. Gubbins*, *J. L. Ramsdell.*

Eaton: *A. H. Burlison*, E. M. Paine.

Emmet: *J. J. Reycraft.*

Genesee: *R. G. Murray.*

Grand Traverse: W. M. Boylan, H. B. Garner, F. D. Munson, *E. B. Minor*, J. Shilliday.

Houghton: *R. B. Harkness*, A. I. Lawbaugh, G. W. Orr, J. B. Quick, C. H. Rupprecht, E. T. Abrams.

Huron: *B. Fiedlaender.*

Ingham: *S. Osborn*, W. G. Wight.

Isabella: *A. T. Getchell*, D. H. McRae, C. R. W. Southwick.

Jackson: D. E. Robinson, *Martha C. Strong.*

Kalamazoo: *P. T. Beller*, R. E. Balch, E. J. Bernstein, *J. H. Crosby*, Geo. D. Carnes, A. W.

Crane, B. N. Epler, G. F. Inch, H. Ostrander, A. H. Rockwell, F. Shillito, A. S. Youngs.

Kent: J. Brady, *W. J. Du Bois*, J. D. Brook, F. J. Groner, C. H. Johnston, W. H. Kassabian, F. J. Lee, S. L. Rozema, L. A. Roller, R. H. Spencer, F. C. Warnshuis.

Lapeer: *W. J. Kay*, H. E. Randall.

Manistee: *W. E. Coates*, J. H. Christenson, J. B. Ewers, E. S. Ellis, R. F. Foster, E. M. Keough, J. A. King, H. MacMullen, A. A. McLarty, G. Knowles, C. A. Norconk, A. S. Payne, H. D. Robinson, L. S. Ramsdell, W. H. Steele, E. J. West.

Mason: A. W. Abbott, T. J. Foster, F. W. Heysett, G. O. Switzen, *W. H. Taylor*, W. C. Martin.

Marquette: T. A. Felch, *A. W. Harnbogen*.

Montcalm: H. L. Bowers, *D. R. Black*, J. Purdon, Wm. H. Belknap.

Mecosta: W. T. Dodge, T. S. Griswold.

Monroe: *C. J. Southworth*.

Muskegon: *G. J. Hartman*, *G. F. Lamb*.

Newaygo: W. A. Kuhn.

O. M. C. R. O.: *E. L. Ford*, S. N. Insley, A. C. MacKinnon.

Osceola: Thos. F. Bray, H. L. Foster, *E. N. Heysett*.

Ottawa: *H. Kremers*, H. J. Poppen.

Schoolcraft: *G. M. Livingston*.

Shiawassee: E. Elliott, *A. M. Hume*.

St. Clair: *C. B. Stockwell*, M. Willson.

Tuscola: *W. C. Garvin*, A. L. Seeley.

Tri: J. W. Decker, J. F. Gruber, B. H. McMullen, E. A. McManus, C. S. Purdy, O. L. Ricker.

Wayne: G. V. Brown, L. Connor, F. Carrow, A. N. Collins, *J. E. Davis*, W. M. Donald, J. E. Gleason, J. H. Carstens, *L. J. Hirshman*, H. J. Hartz, P. J. Livingstone, S. P. Lackajewski, W. P. Manton, Wm. F. Metcalf, J. A. MacMillan, J. D. Matthews, C. S. Oakman, W. R. Parker, R. Parmeter, I. L. Polozker, *F. W. Robbins*, H. M. Rich, B. R. Shurly, E. L. Shurly, *Wm. C. Stevens*, B. R. Schenck, T. F. Spillane, E. B. Smith, J. W. Vaughan, W. Warren, *V. C. Vaughan, Jr.*

Washtenaw: *C. D. Camp*, *C. G. Darling*, G. Dock, J. C. Solis, V. C. Vaughan.

Book Notices

Diseases of the Heart. By Prof. Th. von Jurgensen, of Tübingen; Prof. L. Krehl, of Griefswald, and Prof. Dr. L. von Schrotter, of Vienna. Edited, with additions, by George Dock, M. D., professor of medicine, University of Michigan, Ann Arbor. Octavo of 848 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$5.00 net; half morocco, \$6.00 net.

It would be wholly superfluous to remark on the importance to English speaking practitioners of a translation of any one of the volumes in the Nothnagel series. The present volume has perhaps a peculiar value because, although German clinical and laboratory research is the source of a very large part of our modern knowledge of cardiac physiology, pathology and therapeutics, we have until now lacked an English translation of any one of the several very good German books upon the subject.

The book is made up of monographs on the various affections of the heart, and is to be looked upon and appraised rather as an expression of the views of the great clinicians and teachers who have collaborated in producing it, than as a compendium of all existing knowledge and practice. As Doctor Dock says in his preface: "I think most readers will agree with me when I state my belief that the lack of a simple division of the material and a common point of view is more than made up by finding in one book the sound learning and wide clinical experience of Professors von Jurgensen and von Schroetter, and the broad and deep training in anatomy, physiology and pathology, as well as the excellent clinical observations of Professor Krehl."

For the ordinary reviewer to attempt criticism of the opinions of men of such commanding and authoritative position in the world of medicine would be mere impertinence, and needless, too, because the great interest of the book lies chiefly in the personal point of view maintained throughout. It remains, then, only to explain the scope and division of the work, and note the excellence of each man's part.

The first section "Insufficiency (Weakness) of the Heart," by von Jurgensen, gives us a view point of cardiac disorders which is somewhat novel and exceedingly important. Jurgensen considers cardiac weakness as an insufficiency of the heart, from whatever cause, for the performance of the work demanded of it. Pointing out the increasing tendency to place the responsibility

for this condition almost wholly on the heart muscle, and to consider disturbances of the nervous mechanism as of secondary importance, he proceeds to a classification of the causes of insufficiency, with a very lucid explanation of the way in which they produce the result, and a very interesting and adequate discussion of the symptomatology and therapeutics. The two following sections on "Endocarditis" and "Valvular Disease," also by Jurgensen, are complete and well handled from every point of view, and are rendered additionally instructive by very free citation of illustrative cases.

Krehl's section on "Diseases of the Myocardium and Nervous Diseases of the Heart" is a remarkably satisfactory presentation of a very difficult subject. Myocardial disease is to most physicians perplexing and hard to understand in its many manifestations, and unsatisfactory from the therapeutic standpoint. Krehl has dealt with it exhaustively and clearly, and has given an admirable discussion of therapeutic methods and the indications for their use. The chapter on neurones brings to bear a wealth of clinical observations and sound common sense on a number of conditions which are still rather obscure.

Schroetter's concluding chapter on "Diseases of the Myocardium" is also of a high standard of excellence, but rather less exhaustive, and not so fully illustrated by case histories as the others.

The editorial work is quite above criticism. Doctor Dock has maintained throughout the attitude which is becoming to the editor of such a book, but which is far too commonly departed from, in that he refrains from interpolating his personal opinions. His additions to the text are made only to incorporate important work which has appeared since the publication of the German edition, and he has covered this thoroughly and with the good judgment which one would expect. The personal attention he has given to the revision of the translator's work is evident in the style of the English used throughout, which is unusually good for a translation.

Gonorrhea, Its Diagnosis and Treatment. By Frederick Baumann, Ph. D., M. D., Professor of Genito-Urinary Diseases in the Reliance Medical College, and Instructor in Dermatology and Venereal Diseases in the College of Physicians and Surgeons, Chicago. Fifty-two illustrations in the text. Cloth. Pp. 206. Price, \$1.50. New York, D. Appleton & Company, 1908.

This monograph is a short, concise exposition of gonorrhea in its various phases. It opens with

chapters on anatomy, bacteriology and pathology, which give all the essentials in a satisfactory manner. In the chapter on diagnosis considerable attention is given to urethroscopy, and but little to cystoscopy. In that on prognosis, the author says that "no method of treatment will prevent relapses, which are determined by the pathology of the condition. Suitable treatment can be instituted early, however, and the severity of relapses thus diminished."

Baumann employs the various balsamic emulsions in treatment and shows how they are beneficial; prefers silver nitrate to the organic salts of silver, and gives the preference to injections rather than irrigations.

Gonorrhea in the female is touched upon in Chapter XIV., but the discussion is limited to a consideration of the disease as seen in the urinary organs. Cystoscopic examination and ureteral catheterization are recommended in every case where infection above the bladder is suspected.

The chapter on metastasis is quite inadequate. Consideration is given only to gonorrheal arthritis.

Throughout the teaching of Oberlaender and Kollmann has been followed.

An Introduction to the Study of the Infant's Stool. By Paul Selter, M. D., Solingen, Germany. Translated by Herbert M. Rich, B. L., M. D., Detroit. Published by the Detroit Medical Journal Company, Detroit, 1907.

The importance of the examination of the faces in digestive disorders has been emphasized more and more during the past few years, for with the immense strides which have been made in the study of the physiology of digestion, interpretation of the findings in stool examinations has been easier and more explicit. In no branch of medicine is this examination of more importance than in pediatrics. It is the *sine qua non* of success in the artificial feeding of infants.

Previous to this translation there was no adequate treatise on the fundamentals of examination of the child's stool and the translator has rendered a real service to American practitioners by making the work of Selter available.

The translation is divided into five sections, as follows: I. The Fate of the Food Elements in the Alimentary Canal. II. The Characteristics of the Infant's Feces in Health and Disease. III. Macroscopic and Microscopic Examination. IV. Determination of the Type of Digestive Disturbance from the Examination of the Stool.

The ground is well covered and illustrative cases serve to impress on one the teaching of the text.

Disorders of the Respiration and Circulation. By Professor Edmund von Neusser. Translation by Andrew MacFarlane. 1908. E. B. Treat and Company, New York. Price \$1.25.

Like a previous clinical treatise reviewed in this Journal, this work on disorders of the respiration and circulation deserves our best commendation. The author covers in a satisfactory manner the toxic, auto-toxic, infectious, neurotic, metaloblic and neuritic causes of bradycardia. The treatment and prognosis in each instance is carefully considered.

Part II. on Tachycardia takes up this condition in various acute and chronic infectious and in the constitutional diseases. An excellent short discussion on paroxysmal tachycardia follows. In this the author rightly says that its etiology is absolutely unknown.

A useful appendix on the physiology and pathology of the heart in these conditions concludes the volume.

Atlas and Text-Book of Human Anatomy. Volume III, completing the work. By Prof. J. Sobotta, of Wurzburg. Edited, with additions, by J. Playfair McMurrich, A. M., Ph. D., Professor of Anatomy at the University of Toronto, Canada. Quarto of 342 pages, containing 297 illustrations, mostly all in colors. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$6.00 net; half morocco, \$7.50 net.

Few books have been accorded a more enthusiastic reception by the reviewers than have the three volumes of the Sobotta-McMurrich atlas of anatomy, and justly so, for they form a magnificent series of plates, rarely if ever equaled.

The third volume concludes the vascular system and includes the entire nervous system, together with the organs of special sense. One feature which appeals to us are the plates which include both arteries and nerves. One is accustomed to see them at the same time in dissections and the relations are much better impressed upon one when they are illustrated in one and the same drawing.

The plates for these volumes, made in Vienna, represent the tissues as seen in the injected subject in a remarkably realistic manner. The text is well written, clear and explicit, and a great credit to McMurrich.

It has been said that every physician should

review his anatomy once in three years. It is surely worth while to do so. If it cannot be done in the dissecting room, no better investment can be made than in this series of three volumes.

Milk and Its Relation to the Public Health. Bulletin No. 41, Hygienic Laboratory, U. S. Public Health and Marine Hospital Service. 757 pp.

Probably many physicians are not fully aware of the great scientific and practical value of the publications of some branches of the public service. This volume in particular deserves to be called to the attention of practitioners because of the prime importance of the subject to every one and the admirable and complete manner in which every phase of it is treated.

The book contains 22 sections, written by different men connected with the service. Six of the sections deal with the part played by milk in the spread of specific infections, including typhoid, scarlet fever, diphtheria, tuberculosis, Malta fever, milk sickness, the zoo-parasitic diseases, etc. Eager's article on "Morbidity and Mortality Statistics as Influenced by Milk" contains, in brief space, some very interesting information, while Wiley's section on "Ice Cream" ought to be read by everyone interested in clean and pure food. Various subjects relating to the procuring and distribution of good milk, such as dairy sanitation, the sicknesses of cows and their effects on the milk, bacteriological examinations, certification, etc., are admirably dealt with in several very complete chapters. Probably the average physician would take most interest in the articles on "The Chemistry of Milk," "Pasteurization," and "Infant Feeding." The chemistry of milk and the effects produced upon it by digestive ferments, heat, and other agencies, are not so generally understood as they should be, and the sections on chemistry by Kastle and Roberts, and on pasteurization, by Rosenau present our knowledge of today clearly and simply, in a way to remove many misconceptions. Schereschewsky's article on infant feeding fills a long felt want, in that it sets forth the modern scientific progress along this line better, we think, than does any other publication in the English language. Schereschewsky is an advocate of Budin's system of feeding sterilized whole milk, and gives a very good description of its application to the normal child. He does not go into the therapeutics of digestive disturbances.

The volume as a whole is the most complete

treatise we know of on the disorders caused by milk and their prevention.

Diseases of the Nose and Throat. By D. Braden Kyle, M. D., Professor of Laryngology and Rhinology, Jefferson Medical College, Philadelphia. Fourth Edition, thoroughly revised and enlarged. Octavo volume of 725 pages, with 215 illustrations, 28 in colors. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$4.00 net.

The fourth edition of this work has recently been presented to the medical profession. Many new articles and illustrations have been added, and alterations and additions made to the manuscript of the third edition. The good points of the book are its completeness of mention of the pathological conditions found in the field of rhinolaryngology, and the clearness of description of these conditions. For this reason it may well be considered a valuable work of reference. To a certain extent, however, this latter characteristic forms a basis for criticism. The etiological classifications of rhinitis and pharyngitis are extended and redundant. Many obsolete methods of operative procedure are described in detail, and the tonsillotome and to a less extent the galvano-cautery, relics of the dark ages in rhinolaryngology, are still accorded their old time place. As a book for reference this addition is valuable, but to a beginner unable to differentiate between modern and obsolete in treatment, it is to be recommended with caution.

International Clinics. Vol. I Eighteenth Series, 1908. 309 pp.; cloth, \$2.00. Philadelphia, J. B. Lippincott Co., 1908.

This number contains 19 original articles, for the most part of much merit, on treatment, medicine, surgery, gynecology, neurology and pathology.

Three articles giving the progress of medicine during 1907 form the second half of the volume. These articles include the new things in treatment, compiled by Stevens; in medicine, compiled by Edsall; in surgery, compiled by Bloodgood.

On the whole, this volume is one of the best of the International Clinics.

Progressive Medicine. Edited by H. A. Hare, M. D., and H. R. M. Landis. 1908, Vol. 2. 352 pp. Paper, \$6 per annum. Philadelphia, Lea & Febiger, 1908.

The June issue of this quarterly is at hand and is uniform with its predecessors. This issue is in five parts, each containing reviews of the latest literature on a particular field. Hernia is discussed by Coley; surgery of the abdomen by Foote; gynecology by Clarke; diseases of the blood, spleen, thyroid gland and lymphatic system by Stengel, and ophthalmology by Jackson.

The comments of the contributors, all men of authority add much to the value of the reviews.

MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

The fifty-ninth annual session of the American Medical Association was held in Chicago, June 2 to 5. For the first time since the St. Paul meeting in 1901 the association met in the center of the country. To this fact, as well as to the greatly increased membership in the last few years is due the large attendance. The registration office opened at 8:30 on Monday morning, and it was apparent almost from the start that all previous records of attendance would be broken. In the four days of the session 6,447 members were registered. Including those Chicago members who did not register, there were at least 500 in attendance whose names did not appear on the registration list. The actual attendance would not fall far short of 7,000. Adding at least 10,000 guests, exhibitors, etc., makes the actual number of persons in attendance about 17,000. The weather was of that wellnigh perfect brand that Chicago can exhibit at times, being bright and clear, yet pleasantly cool and bracing. The general headquarters and registration offices were located in the First Regiment Armory at Sixteenth and Michigan avenue, where were also found the sections on Stomatology and Pathology and Physiology, as well as the House of Delegates, commercial exhibit, scientific exhibit, etc. This building, one of the finest national guard armories in the country, served admirably for convention purposes. The meeting places for the other ten sections were the First and Second Presbyterian Churches, Sinai Temple, the Calumet Club and Grace Church Parish House, all within a few blocks of the general headquarters and the Orchestra Hall in the down town district, in which the Section on Surgery and Anatomy met. This hall, one of the handsomest auditoriums in the city, seats 2,500, and was sup-

posed to be ample for the meetings of this section, yet it was on several occasions inadequate, being crowded to the doors.

The House of Delegates was called to order on Monday morning at 10:00. by the president, Dr. Joseph D. Bryant, of New York, who in his presidential address, commended the work of the Council on Pharmacy and Chemistry as well as that done by Dr. McCormack in educating the public. He also recommended that a standing committee be established to elaborate the ethical principles underlying the practice of medicine and that general instruction in ethical medicine be made a part of the undergraduate course. He dwelt particularly on the efforts now being made to restrict experimentation and recommended action by the House of Delegates on this subject. Dr. Bryant also called attention to the invitation extended by President Roosevelt to him as president of the American Medical Association, to take part in the Conference recently held at Washington on the Conservation of Natural Resources.

The report of the General Secretary showed that the membership of the association on May 1, 1908, was 31,343, a net gain for the past year of 3,828. The reports received from state associations regarding the organization of branch associations showed that two states had voted in favor of their establishment, seven had voted against and the remainder had at the time of the publication of the report taken no action. The appointment of a committee to consider uniform provisions for the regulation of county, state and American Medical Association membership was recommended. A communication was presented from the secretary of the American Association for the Advancement of Science asking that the American Medical Association appoint representatives to the Council of that body.

The report of the Board of Trustees included the customary report from the auditing company, showing that the entire business for the fiscal year of 1907 was \$385,030.89; that the total expenditures of the year had amounted to \$356,222.21, leaving a net revenue for the year of \$28,808.68. Detailed statements of all the various accounts of the association's business were given showing the items in each case. The report showed that during 1907, 2,715,293 copies of The Journal had been issued, forming a weekly average of 52,217, an increase of 12½% over 1906.

The Committee on Medical Legislation reported that the Army Medical Reorganization Bill and

the Carroll-Lazear Pension Bills had become laws during the last session of Congress. The importance of uniform and adequate state legislation on the practice of medicine and the preservation of public health was emphasized as well as the necessity of careful study of the problems involved. The committee recommended that pending the completion of the work now being done only those changes in existing laws which are imperatively needed should be attempted by state associations. The formulation of the Vital Statistics Bill endorsed by the United States Census Department, the American Public Health Association, the Conference on Uniform State Laws of the American Bar Association and the American Statistical Association, was reported and the endorsement of the House of Delegates was asked for this measure. The report of the Chicago Conference on Medical Legislation was also given.

The Council on Medical Education reported that the work of the Council during the past year had been along the following lines:

1. The inspection and classification of medical colleges as (a) acceptable, (b) doubtful and (c) unsatisfactory.
2. The conducting of an annual conference with representatives of state examining boards and leading educators for the discussion of the important problems of medical education and medical licensure.
2. The collection and compilation of data regarding medical college students and graduates and (b) regarding results of state license examinations.
4. A thorough investigation of preliminary and medical education in Europe.
5. Working for the advancement of the requirement of preliminary education in the United States to include a year's work in physics, chemistry, biology and modern languages.
6. Obtaining accurate information regarding high schools and universities in their relation to medical education.

The Board of Public Instruction reported that it had secured a secretary, Dr. R. Max Goepp, of Philadelphia, and that it was considering the establishment of lecture systems and of state boards of public instruction and intended to publish articles in the magazines and public press for the enlightenment of the public on disease.

The Committee on Ophthalmia Neonatorum advised the enactment of laws in each state re-

garding the registration of births and placing the control of midwives in the hands of the boards of health; that health boards distribute circulars to midwives and mothers on the dangers and prophylaxis of this disease; that state and local boards of health prepare and distribute proper prophylactic solutions with specific directions for their use; that proper records be maintained in all hospitals in which children are born; that periodic reports be made by all physicians to boards of health; that concerted effort be made along the lines of public education throughout the country. This report was approved by the chairmen of the Sections on Ophthalmology, Obstetrics and Diseases of Women and Hygiene and Sanitary Science.

The Committee on Scientific Research recommended the appropriation of \$200 for the assistance of each of the following:

Drs. D. J. McCarthy and M. E. Myers, Philadelphia, "An Experimental Study of Cerebral Thrombosis."

Dr. Karl Voegtlin, Baltimore, "Chemistry of the Parathyroid Glands."

Dr. Isabel Herb, Chicago, "A Study of the Etiology of Mumps."

Drs. R. M. Pearce, Albany, N. Y.; H. C. Jackson and A. W. Elting, "A Study of the Elimination of Inorganic Salts in a Case of Chronic Universal Edema of Unknown Etiology With Apparent Recovery."

Dr. H. T. Ricketts, Chicago, "An Investigation of the Identity of the Rocky Mountain Fever of Idaho with that Found in Western Montana."

On Tuesday afternoon, at the third meeting of the House, the reports of the Reference Committees were taken up, the Reference Committee on Medical Education approving the work of the Council on Medical Education and recommending that it be continued. The Reference Committee on Reports of Officers recommended the appointment of a committee of five to consider the elaboration of the Principles of Ethics. Resolutions condemning the legislative efforts to restrict animal experimentation were presented. The action of the Board of Trustees in preparing the second edition of the Directory was approved. The Reference Committee on Legislation and Political Action recommended the approval of the model law for vital statistics, which recommendation was adopted. The resolution presented by Dr. A. T. McCormack, of Kentucky, requesting all state associations publishing or controlling medical journals to restrict advertise-

ments to such preparations as were approved by the Council on Pharmacy and Chemistry was adopted. A committee of three to confer with a like committee from the American Pharmaceutical Association in regard to drug reforms was authorized. The candidacy of Dr. C. A. L. Reed, of Cincinnati, for the United States senate was endorsed.

On Thursday afternoon the annual election took place with the following results:

President—Dr. William C. Gorgas, Ancon, Panama.

First Vice-President—Dr. Thomas Jefferson Murray, Butte, Mont.

Second Vice-President—Dr. John A. Hatchett, El Reno, Okla.

Third Vice-President—Dr. Thomas A. Woodruff, Chicago, Ill.

Fourth Vice-President—Dr. E. N. Hall, Woodburn, Ky.

General Secretary—Dr. George H. Simmons, Chicago, Ill., re-elected.

Treasurer—Dr. Frank Billings, Chicago, Ill., re-elected.

Trustees to serve until 1911—Dr. Wisner R. Townsend, New York; Dr. Philip Mills Jones, San Francisco; Dr. William T. Sarles, Sparta, Wis.

The following nominations were made by the President and confirmed by the House of Delegates:

Committee on Medical Legislation: Dr. Charles Harrington, Boston, Mass., to serve until 1911.

Council on Medical Education: Dr. Victor C. Vaughan, Ann Arbor, Mich., to serve until 1913.

Committee on Transportation and Place of Session: Dr. M. L. Harris, Chicago, chairman for three years.

The following were elected honorary members:

Dr. Edward F. Schaefer, Edinburgh, Scotland.

Dr. August Martin, Griefswald, Germany.

Dr. E. Treacher Collins, London, England.

The Committee on Awards reported the following awards in accordance with the report of the Committee on Scientific Exhibit:

Dr. H. T. Ricketts: Gold medal for research exhibit on tick fever.

Dr. Fenton B. Turck: Diploma for exhibit illustrating pathology of peptic ulcer.

Northwestern University Medical Department:

Diploma for teaching exhibit, illustrating morbid anatomy.

Rush Medical College: Diploma for teaching exhibit, illustrating morbid anatomy.

Dr. Charles H. Beard: Diploma for exhibit of drawings of the human eyeground.

Dr. Maximilian Herzog: Diploma for exhibit, illustrating early human embryology.

St. Mary's Hospital, Rochester, Minn.: Diploma for clinical and pathologic exhibit of stereoscopic photograph.

Dr. Edmond Souchon: Diploma for improved method for the preservation and exhibition of anatomic specimens.

Dr. A. M. Stober, Cook County Hospital: Diploma for exhibit, illustrating blastomycosis.

Dr. Mallory and Dr. Wolbach (Harvard): Diploma for exhibit of drawings and photomicrographs, illustrating the classification of tumors.

U. S. Public Health and Marine-Hospital Service: Honorable mention for exhibit, illustrating the investigations of Dr. C. W. Stiles on book-worm.

The Committee on Transportation and Place of Session recommended Atlantic City as the next meeting place, which choice was agreed to by the House of Delegates. The Reference Committee on Legislation and Political Action reported, requesting the Committee on Medical Legislation to arrange for a conference with the Committee of One Hundred, the Surgeons-General of the Army, Navy and Public Health and Marine-Hospital Services with a view to securing co-operation on the establishment of a National Department of Health. After the transaction of some routine business the house adjourned.

One hundred and thirty-four members of the House were present out of a total membership of one hundred and forty-two. The meetings of the House were better attended than at any time since its organization. The business was dispatched with accuracy and rapidity, the most notable tendency being the reference of resolutions, communications, etc., to the appropriate reference committees without discussion, reserving the consideration of the questions involved until the reference committee had considered the matter and submitted a report.

The social events of the week were particularly attractive. On Monday night the secretaries of the state associations and the editors of the state

journals met at dinner and completed the organization of a state secretaries and editors' association. A dinner to foreign guests as well as a number of other social events also occurred on Monday evening. On Tuesday evening twenty-seven alumni dinners were held in the various hotels and restaurants throughout the city, one of the largest being that of the University of Michigan, at which over 350 alumni were present. On Wednesday evening the president's reception and ball was held at the Coliseum, thousands of members and guests being present. On Thursday evening the local profession tendered the members of the association a smoker at the Coliseum at which the attendance amounted to about 8,000. Numerous social attractions were provided during the day for the ladies and guests including receptions at the South Shore Country Club, Chicago Women's Club, etc. The sections were all largely attended and the programs were of a high order. The session was in every way the most noteworthy of any of which has yet been held and it is anticipated that some years will elapse before the record established will be surpassed.

County Society News

Midland.

At the last meeting of the Midland County Medical Society, the following officers were elected: President, C. V. High, of Coleman; secretary-treasurer, G. Sjolander, of Midland; delegate to the Manistee meeting, F. A. Towsley.

It was decided to arrange programs for each meeting from now on and each member will be requested to take part. Doctor High will give a paper at our next meeting "On the Importance of the Microscope in the Examination of the Urine."

G. SJOLANDER, *Sec'y.*

WANTED—A FAMILY DOCTOR.*

FRANK BURR TIBBALS, M.D.

Detroit.

Going along one of the older streets on the

*In response to a toast at the dinner of the First Councilor District.

east side of Detroit recently, to make one of my fifty-cent calls, I saw a new sign reading, "Dr. Daniel Maloney—Medical Broker." This was a new one to me, and I went in to investigate, and succeeded without great difficulty in getting his story, which I give to you as follows:

"I wuz born iv poor, but Irish parents in Shantytown, New Yorrk, with goats an' tin cans for me childhood's toys. Me father wuz a Tammermy polisman in th' Tenderloine deestric, and by some econermy aided by th' protect'f tariff existin' befure Teddy Rooservilt wuz polis commishuner,—wuz able to give his little Danny th' foinest edjicashun th' peoples money wud buy. Holy Cross, P. & S., an' Belleevue Hospitale completed me preliminary edjicashun, an' I thin cros't th' briny in sarch iv more wurrulds for me bright intelleck to conker.

Afther takin' a few F. R. C. S.'s in Dublin an' Edinburh an' some more in Londun, I took me little flier in Paris an' Vienna as so many iv th' Amerikans do,—an' with a thrunk full iv degrees an' diplomies came home to begin wurrk, havin' spint elevin years altogither in speshul preparashun for me chosen professhun. Me degrees supposed to illusthrate me tho'ro trainin' almost phlastered th' walls iv me office, which wuz sumpshusly fitted up with th' proceeds iv me Dad's il'literit toile.

I jined Tammermy Hall an' th' Midical S'cieties, but neglected to become aither a Profissor or a Speshulist. Afther fiftin' years iv a large practis' among all classes iv S'ciety I wuz still not makin' enuf money to support me fam'ly. Me poorer pashunts all sthood me off an' wint to th' dispin-serry, me wealthier pashunts all thanked me for me kindness in recommindin' a speshulist, which I did at th' rate iv about a dozin a day.

Afther touchin' me ould father for rint-money year afther year, he at las' sez to me, 'Danny,' sez he, 'whin I acted as go-bechune for th' under wurruld with th' powers above, I got me little percint on ivery deal.' 'Taint't ithical for doctors,' sez I. 'To h'll with ithics,' sez he. Thinkin' this over as th' months wint by, I at las' begin to wunder if me sharp ould father was'nt right. Here for fiftin years I had been runnin' a midical intill'gince office, an' collectin' no fees, an' only occashunl' those borborygmie eructashuns known as thanks. So I resigned me Midical S'cieties to save thim th' thrubble iv puttin' me out, an' hung up th' sign you see, 'Dr. Daniel Maloney—Midical Broker,' with a write up an' card in th' papers

sufficint to inform th' public iv me novel biznis'.

I wuz bissy fr'm th' vary firrst day. I charged th' dear people (many iv thim me ould non-payin' pashunts) tin dollars for a thu're di'gonstic ex-aminashun, with infurmashun as to which group iv speshulists an' which speshulist iv th' many groups they naded to consult.

Me great thrubble at firrst wuz to find ginerel practishuners to care for th' bulk iv the pashunts who naded a speshulist no more thin th' divil nades holy water. Most doctors ra'ly are ginerel practishuners, all right, all right, but ashamed the' are to admit it, even under oath. 'Ye're a speshulist, I belave, Doctor?' sez th' pashunt. 'O, yis indade,' sez he, 'I limit me practis to mid'cine an' sarghery, both internil an' externil, with speshul attinshun to patherlogical condishuns iv th' thorix an' abdomin, includin' obstet-ricks, fallin' iv th' womb, varicose veins and chilblains.' That holds thim for awhile, until their money is gone. If they can borry some they go on down th' line iv itchin' palms, but niver come back to th' poor divil iv a doctor who gave thim their furrst incintiv' to th' higher life, at anny rate not while they have a dollar left.

This hermaphroditic speshulism is a great graft for shure. A speshulist ye know by th' midical diffinishun iv th' term, is a man who limits his practis' to cert'in spicified dizeases, or to th' dizeases iv a single organ or class. Why th' divil thin should th' oculist or th' dermatol'gist do life insurance wurrk, or th' proctol'gist do gynaecology, or th' gynaecol'gist who tags himsilf, 'For wimin only,' do appindectomies on min? Is a speshulist a speshulist, just becaze he sez he is, an' if so, thin phwat is th' line iv demarkshun bechune a speshulist an' a ginerel practishuner? I take it that a true speshulist (an' there be sich, tho' it want an oil emershun an' siveral smears to find thim), is a *consultant*, who afther long ex-perience in cinirel wurrk finds himsilf better fitted for cert'in things, an' limits his wurrk to that. He wud thin kape his hands in his own pockits, an' rayfuse as dirty munnv fees offered him for cases outside his speshulty. He might aven go so far as to sind back th' pashunt to th' family doctor, whin he has rindered him phwat servis he kin. Is this a prophetic vishun, or am I only dhreamin'?

Me friend O'Brien sez that at the presint time, with iv course some excepshuns, he classifize doctors in two groups—Skin-spechulists an' Grafto-interol'gists. If th' people find a man willin' to pose as a ginerel practishuner, they only call him

for colds. There is th' family Oculist, Aurist, Laryngol'gist, Gastrointerol'gist, Proctol'gist, Gynaecol'gist, Genitourinaryol'gist, Obstetrishun, Sarghon, Internist an' Childrin's Speshulist, but no family doctor exc'pt for th' servants who can't afford to pay him.

Tin or twelve iv these speshulists gather 'round th' bedside iv th' rich Mrs. Rockyford, each graspin' an' treatin' th' part belongin' to him, an' each willin' to use th' aither hand in graspin' th' part belongin' to his naybur, should a dhrunkin shofur on a flat tire make him tin minits late.

'Marie,' sez Mrs. Astervilt, 'kiss th' child good-mornin' an' good night for me, an' till him I'll see him Sunday.' She thin hastens to her oculist for two dhrops iv boracic in her lift eye, to her aurist for three dollars' worth iv hot air in her ustakin tube, has her laryngol'gist squirt adren'lin solushun up her nose, an' takes abdominal missage fr'm her gastrointerol'gist. Th' proctol'gist pronounces her enlarged anal papilli as now only vizable with th' wan-twilfth objectiv', but caushuns her ag'inst neglectin' threatmints list th' monsthur gain th' upper hand. Afther a visit to her gynaecol'gist for a cirvicil plug an' a tampon, she entirs upon th' labors iv th' day with gladson' heart—attinds th' Mothers' Club at three, a bridge party at foive, th' tha'eter at eight, whince she reluctantly turns homeward for her quartirly visit with her lovin' spouse.

Th' doctors are an' inconsistint lot iv cusses. They oppose pay'd advertisin', list wan man moight pay for more space thin th' ithers war willin' to, but take all th' free space they can git, an' th' man who has bought th' rayporther th' most dhrinks, an' at th' same time succissfully advertiz'd himsilf among th' doctors, devilops into th' highest pric'd speshulist. He is certainly a silf made man, an' to my way iv thinkin' take a h'll iv a lot iv responsibility off iv th' divine Creator. We condemn th' Homypath because he practis's Homypathy only part iv th' time—principally whin he foinds nothin' th' matter with his pashunts—but condone th' for-rivennue-only speshulist, whose speshulity is only a side line to draw ginerall bizness.

Is ther any nade for speshulism anyway? Indade there is, iv th' roight brand.

We nade men who by large expeer'ence have acquired better judgmint an' greater dexterity in handlin' difficult cases thin th' average man. A succissful sarghon, bedade, is only a good head, an' clever fingers,—but because he happins to hav' had th' chance to use his fingers more he can

handle thim better thin th' rist iv us. 'Tis mesilf that wud rather hav' an appindictomy at a hundred an hour, thin a phneumony at a dollar an' a half a day. There is less danger iv thrubble, and more munny.

In th' fiftiinth cintury they called th' sarghons, incisors *or* cutters. They are now incisors *an'* cutters. Th' incisor has a good head an' clever fingers,—th' cutter has clever fingers an' an empty think tank. Th' sarghon has a limited field, to be shure, bounded on th' north by th' pichuitary body, on th' east 'y his own narve, on th' wist by th' pashunt's purse, an' on th' south by an in-growin' toe-nail,—but ivery thing bechune these narrow limits is his meat, an' marvel'us indade is his wurruk. He is th' patint universil can-opiner iv th' a'ge. Th' campaign orator sez, "In Americky there is an opinin' for ivery man." The sarghon sez, "In Americky there is an opinin' *in* ivery man."

A Jew livin' in Shy'wassy county came down to th' city wid a pain in his belly, an' iv course was promptly operated, for appindicytis. Th' operashun was a brilli'nt succiss, but whin th' Jew l'arned thru' th' loquasity iv th' nurse, that he had pay'd two hundred to be lavied iv wind on the sthomack, he immejutely died iv shock,—an' they sint th' rist iv him home to his sorrowin' family, where th' box arriv'd in due season bearin' th' tag, "Opined by mistake."

In several cities, they are now inshurin' various parts iv th' body 'gainst assault an' battery by th' sarghon's knife. It wurruks loike this: Say a man an' his appindix are mutually attached to wan another, so for tin cints a week he inshures his appindix for th' benefit iv himsilf an' family. He is furrst givin th' badge iv th' order, consistin' iv a tattoo on his sthomack readin' "Hands off." Should he thin lose his appindix while dhrunk or otherwise unconshus, he draws his expinsis an' foive hundred dollars,—but should he have his appindix removed by malis-aforethou't, he is arristed for obtainin' monny undher false pretinsis. This looks loike a good thing, but is too expinsiv' for th' averige man, since to adequately protact his whole anatomy wud cost about tin cints a minit, an' make him look loike a walkin' edishun iv th' Chikago Amerikan. In th' same wav a woman prizes her ovariz, mainly for sintimintal reasons, but occashunly becaus they are good for childhrin. She objects, however, to th' badge iv th' ordher, interferin' as it does with th' modern s'ciety costum, hince th'unprotacted female will doubtliss continue as th' cutters' main

source iv supply.

Will; will; will; how me tongue wags on. Whin me trolly slipp'd off I wuz tellin' ye about my wurruk in New Yorrk. My intill'gince office makes monny, an' does good, an' 'tis me heartt's desire to establish th' same biznis in all th' large cities. By firrst creatin' th' demand fr'm th' people, it is easy to foint good doctors who are not ashamed iv not bein' speshulists. I'm makin' good speshulists too, for I niver recommend one who does not strictly limit his wurrk as a consultant to th' cases in his chosen line.

I hav' but raycintly come to your middle wist where life is wurrrth livin' for all but th' doctors. an' have not yit entoirely classif'd th' profeshun in your growin' cities,—but so far I foint in ivery 500 men, about 230 incisors an' cutters,—96 gynæcol'gists,—88 eye-ear-nose en throaters,—67 internists or inside wurrkers,—an' 19 ginerall practishuners, with a few doubtful.

Should I be as succissful as me cause merits, I hope to edjucate th' people to th' fact that a well trained doctor is compitint to care for ivery mimber iv th' family, for almost ivery ailment, with th' counsel an' assistance, if nade be, iv th' more expeerinced man, th' speshulist. Th' aminded list wud thin read, 50 speshulists in all lines, who absolutely limit their wurrk to their speshulty, an' 450 ginerall practishuners or family doctors. Thin in your beauchufel cities life will be wurrrth livin' for doctors, as well as for bankers, speshulists an' other cap'tilists.

Should you mention me laudable ambishion to anny iv yer fri'nds, I shall not moind bein' kicked or cuss'd, havin' a hide loike a rhinossorus. Sartin I am, that some day, if I live long enuf, I shall be Emeritus Profissor iv Economics iv th' Americekan Midical Associashun with McCormick, an' yer own Doctor Connor on me executif staff.

Query: Is Maloney a reformer or a dreamer?

MEMORIAL ADDRESS TO DR. N. W. WEBBER.*

J. H. CARSTENS, M. D.,
Detroit.

Dr. N. W. Webber was a practitioner in this country for forty years. He was born February 8, 1839, at Gardiner, Maine, and moved with his parents to Chicago when quite young. He was educated at the Rock River Seminary. When the war of the rebellion broke out he joined the

army as hospital steward of the 16th Illinois Cavalry Regiment. Here he gained a large experience in the treatment of diseases and injuries of war, constantly assisting the surgeon of the regiment. The senior surgeon of the regiment was killed in battle. One day when he was sitting beside the assistant surgeon on a bench in front of the hospital tent, a bomb unexpectedly came that way and exploded, killing the surgeon at his side. As no other surgeon could be secured he was appointed to succeed him and he acted as assistant surgeon to the end of the war. He then returned to Chicago and graduated from the Chicago Medical College in 1866. He was Cook County physician during the cholera epidemic the next year.

He married Lucretia Mason in 1867; had three children with her. She died in 1876. In 1880 he married Carolina Brewster and had three children with her.

When the Detroit College was organized in 1868 they looked around for some one to take the chair of anatomy. Dr. Webber, living in Chicago at the time, was recommended, appointed, and moved to this city, where he lived until his death. He was a thorough anatomist and a most excellent teacher. Dr. Coryden Ford was professor of anatomy at the Michigan University and at Long Island Medical College, and had a national reputation as the best anatomist in the country, and still I have heard students who had been instructed by him say they could learn just as much from Dr. Webber.

There was a peculiar dry humor about him, and he had a unique way of stating facts, and with most beautiful demonstration enabled him to make an usually dry subject very interesting. He held this chair until 1880, when Dr. Jenks removed to Chicago. He then took the chair of gynecology previously held by Dr. Jenks, turning over the chair of obstetrics, also held by Dr. Jenks, to the writer, who before that had occupied the chair of therapeutics and materia medica. The chair of gynecology was held by Dr. Webber for 15 years, until ill-health compelled him to resign. The new chair he filled perfectly, as that dry humor mentioned before was unusually applicable to the teachings of gynecology and enabled him to make his course most interesting.

He held many positions of trust; was secretary of some of the State fraternal orders, and grand medical examiner for some others. He was pen-

*Read before the Wayne County Medical Society, May 18, 1908.

sion examiner of this district at a time when it required a great deal of work. For twelve years he was secretary of the board. These positions helped him professionally, but required a great deal of literary work and writing, and he was thus prevented from contributing to the medical literature to any extent. He wrote a few papers of marked worth, but being before the days of the extensive employment of stenographers, he had so much to write for the pension board and various societies that he was too tired to write medical articles.

He became seriously ill and incapacitated from work for more than a year, but finally recovered and was able to accept an office as medical examiner for a life insurance company, and then ceased taking active interest in medical matters.

He was a man of marked ability, a good student, a kind and indulgent father, but above all he was a man of truth and sterling honor, a man who lived up to the highest standards of medical ethics. There was no claptrap or pretense about him nor would he allow it in others. Everything must be honest and above board and straightforward—the soul of honor. Peace be to his ashes.

MEMORIAL ADDRESS TO DR. HAL C. WYMAN.*

E. B. SMITH, M. D.,
Detroit.

During his medical course at the University of Michigan,[†] Hal Wyman was considered more than an average student, yet not brilliant in any particular subject. There are two things for which, it seems, he was noted. First, he was a diligent student, and secondly, it was known and commented on that when Hal got into the dissecting room alone there would be a few fingers and toes missing from the subjects. He seemed to take special delight in amputating these members. In his senior year he prepared the instruments and patients for Dr. Donald Maclean. It was related of this boy student that while he with others were going to their dinner a wagon passed down the street. In it seated beside the driver was a man who had his arm bandaged and seem-

ed to be suffering. No one noticed him until he came opposite Hal. He immediately ran across the Campus, and jumping into the rig asked what the trouble was. The driver said the man's arm had been caught in a machine and was badly hurt. Hal told them to drive to the Cook House where he would get for them the best surgeon in the United States, Dr. Donald Maclean. The man was taken to the hospital and his injury dressed. It was one of the first elbow resections that had been done at the University in a number of years. Dr. Maclean repeatedly referred to this incident and gave young Wyman credit for saving not only the man's arm but also his life.

To the north of Blissfield, where Dr. Wyman located after his graduation, was situated his old alma mater with its clinics; an hour's ride to the west was the rising town of Adrian; to the east the town of Monroe; and to the south the busy city of Toledo. Here he practiced for three years and then went abroad. He studied in London, Edinburgh, Paris, Heidelberg, Berlin and Vienna for a year, taking up medicine as well as surgery. He also made a study of the customs, language and literature of these countries. Many a German of this city will testify as to Dr. Wyman's ability to speak his language.

In 1876 he returned to Blissfield, where he established a clinic, and his sign read "Medical and Surgical Clinic of Dr. Hal C. Wyman." The building in which he was located was a two-story frame building with a basement. It was built for a general country store. On the first floor were his office and sleeping rooms. The second room was used for patients, a hospital. This building is still standing. In the cellar of this building he dissected, at first, animals, and later on secured by some means human subjects. It was about this time that Dr. Dayton Parker became associated with him in the work of dissecting, and as others came in to take part in the work, here began a desire to teach.

Before long he was doing all kinds of operative work, and particularly did he interest himself in eye work. Here in this little inland town in the 70's, we find this man extracting cataracts and doing other major operations upon the eye. So that Rochester, Minnesota, was not the first small town that has seen and felt the ingenuity of the aspiring Yankee medical will.

Like Alexander, Young Dr. Hal wanted a new field to conquer, so in 1880 he came to Detroit, and in 1881 was appointed Professor of Physiology in the Michigan College of Medicine. Here

*Read before the Wayne County Medical Society, May 18, 1908.

†The strictly biographical data of this paper are omitted, as being essentially repetitions of the facts contained in the obituary notice of Dr. Wyman in the April issue.

he began to make felt his striking personality. Some of the older members of the faculty were not entirely pleased with his lectures, saying that it was "Wyman's" physiology he was teaching. This seems to have been true. He did not always follow the text book but clothed the subject with ideas entirely his own. His lectures were intensely interesting to the students. His diction was polished and his descriptions apt. At his lectures and afterwards his clinics, there was always a full attendance. Students even after graduation would come again and again to his clinics.

He was now beginning to do more and more surgical work and see more patients in consultation. The older medical men soon knew that a man of strength and character had settled among them. The "Powers that Be" at this time decided to make one strong medical school in the city and to this end the old Detroit School amalgamated with the Michigan School. This movement gave Dr. Wyman his opportunity. So quick was he to see it and so quick to grasp it, that upon the very heels of this amalgamation he established the Michigan College of Medicine and Surgery, had himself appointed professor of surgery and then launched out. Emergency Hospital was built and equipped. Dr. Wyman then installed Detroit's first free ambulance, and this brought to his door more accidental and emergency surgery than this city had ever before seen or may ever see again brought to one place and treated by one man. He seemed to be the man of destiny. His star stood out, shone clearer and brighter than any other star of the same or greater magnitude. He worked night and day. His consultations which came to him in ever increasing numbers were of all kinds, from every class of people and from every part of and beyond the confines of Michigan. The railroads carried him now on his missions of relief, as, in his early career, his horse had done.

Few men have done better work than Dr. Wyman, none have done more. Ever busy, always alert, storing his mind with a great fund of knowledge and this knowledge always of a particular kind, he was able, without being forewarned, to lay before his hearers this knowledge as semi-scientific data. His travels stored his well kept brain with a wealth of learning. The mountain fever of the Rockies he had seen and studied; the southern fever's ravages he had observed; malaria was a well read subject with him. He had seen it all up and down the Raisin

River in Lenawee county and the other counties of Southern Michigan, and he took special delight in reviewing the subject wherever he found it in his travels; cholera was a subject he liked to talk upon, until latterly this disease had touched his household and nipped in the bud of her young womanhood one whom he loved so well.

His trip around the world finished him as the most traveled physician in our fair city. It was a trip of research as well as of pleasure. In India along the Ganges he studied the plague. In Palestine and Constantinople he took an interest in the eye diseases peculiar to these countries. Down the Nile he traveled. It was while there he observed and studied the sleeping sickness. His friends know how he expressed the opinion that some day the birds of the air would carry this disease from the Old World to this New Country of ours. In Japan he spent some time in studying the people, their habits and customs, and from the knowledge thus acquired he took the stand that it was unfortunate that Japan was victorious in the recent war with Russia. It was his prophecy that America would rue the day she declared in favor of the Japanese.

With a family history of a parent having died of consumption and a personal history of, while a student in Paris, having had a pulmonary hemorrhage which nearly proved fatal, this being followed by inflammation of the upper lobe of the right lung, he was thus at the beginning of his career left with practically one normal lung with which to fight out his life work. In later years rheumatism took hold of him, affecting his heart, giving him endocarditis and leaving behind the blight of a mitral regurgitation.

Dr. Wyman's hours were not all confined to the practice of medicine. He was the author of more papers than any other medical man of Michigan. As a historical writer he had few equals. Every detail of the struggle between the North and the South was clear in his mind. He had gone to the old battle fields. He knew where each opposing army had stood, knew where they had made their charges, knew at what points upon the field the battle had changed, and where victory was gained. His boyhood days were spent where the British and the Colonial armies had crossed and recrossed and where Tecumseh with all his strategy had planned to trap and exterminate the little garrison that had fortified itself for the protection of the few families living about. His many papers read before the historical societies of the city,

state and country, bear out how keen a student he was and how faithful a narrator. He was much interested in the life of General Hull, a man condemned almost universally by historians. Dr. Wyman gathered data to show that the General was justified in his acts; that he was the big man, the great general. Among the medical books written by Dr. Wyman are "Diseases of the Bladder and Prostate Gland," written in 1901 for the Physicians' Leisure Library published by Geo. S. Davis & Co., and "Experimental Surgery," written for the same firm.

Here let me drop a tear to Dr. Wyman's memory, the memory of a good companion, a clean acquaintance, one whose conversation was a delight, one who never was known to tell a story that could not be told in your household in the presence of your family. Some men are gentlemen only in public, Dr. Wyman was always the gentleman. A medical man who had many patients and no man was more loved by his patients than was he. Some of us may have heard the doctor's praises sung by old Mike Connor. One eye lost and a corneal opacity of the other—totally blind—this poor man was led from place to place. Dr. Wyman performed an iridectomy and Mike's night became day. He loved Dr. Wyman with all the fire and enthusiasm of his nature and his "God bless you, Doctor Wyman" has been echoed by hundreds of others. To this you and I breathe a quiet amen.

Doctor Wyman was a color builder in words. He had qualities that only those possess who are called great—those qualities that set the strong apart and make them stand out to be seen and felt by the world. His intellectuality never weakened. He fought the fight and kept the faith in his work—in his college. This rare and radiant mind piled up contributions to the science of medicine and surgery. In diagnostic skill he was a very pontiff of exactness. After all has been spoken and written of this student, scholar, gentleman and man of science, let us draw the curtain remembering his many virtues, his vigorous personality, the lack of hostility in his make up. He prognosticated his own case and then lay down to let the sands of life run out.

Correspondence.

Philadelphia, June 1, 1908.

To the Readers of the Journal:

The Wistar Institute of Anatomy and Biology appeals for co-operation in securing human embryos for scientific investigations.

No one, more than you, will appreciate the value of researches in anatomy and other fundamental sciences, for the advancement of your art. The Wistar Institute, therefore, begs you to assist in placing this material in the hands of embryologists who will make good use of it.

The collections of embryos and other specimens belonging to the Wistar Institute are always open to any competent investigator for inspection and study. Its museum serves as a depository for anatomical materials which may have served the purpose of one investigation and are to be stored for future study.

A moment's thought will convince you that in one month's time in a great city, more human embryological material than exists in any collection in the world, goes to waste.

Will you help us to save this material that American Anatomists may study it?

Place embryos, including membranes, immediately in a mixture of one part formalin and nine parts water. Never place an embryo in pure water; it damages it for histological purposes.

The Wistar Institute will send to your office, on request, a neatly boxed jar, with a quantity of formalin and full directions for preserving embryos. Operations for tubal or extra-uterine pregnancies are likely to yield the most perfect specimens.

Full credit will be given the collector in every case, and specimens will be reported upon promptly. The Institute will gladly meet any expenses incurred.

If you have a specimen for the Institute, telephone Preston 2575 (Bell 'phone), and a messenger will call for it, or you may send it by express to

THE WISTAR INSTITUTE OF ANATOMY AND BIOLOGY,

36th Street and Woodland Ave.,

Philadelphia, Pa.

News

On Tuesday, June 9, an appeal to public charity was made in Detroit, for the furtherance of the aims of the Detroit Society for the Study and Prevention of Tuberculosis. The day was called "Tuberculosis Charity Day," and was widely advertised in advance; the municipal officials, police, commercial houses, schools, factories, business men, railroads, hotels, etc., lent their hearty coöperation. The collections were arranged for by a committee of women, under the general direction of Mrs. W. A. McGraw, chairman. Subcommittees attended to the endless details of advertising, obtaining the right to ask contributions in public and private places, securing women and girls to make the collections, printing of badges, boxes, etc., the pledging of automobiles, selection of stations, appointment of chaperones, etc., etc. The headquarters were in the Hotel Pontchartrain, where all during the day the committees were busy; several physicians gave generously of their time, both in preparation for the day, and in the duties of the day itself. The total collections were over \$11,800 gross, and over \$10,900 net. The proceeds will be used according to the discretion of a large committee of representative women, business men, and professional men, including several physicians.

Dr. F. S. Bell of Northville has returned from a trip to Arizona.

Dr. B. H. Jenne has removed from Clio to Otisville.

Dr. Charters of Mackinaw has moved to Mackinac Island, in the same office with Dr. Bailey.

Dr. J. M. Peebles of Battle Creek is giving numerous lectures in different places on the subject of his foreign travels.

Dr. D. E. Bagshaw of Saginaw has returned from a post-graduate course in Philadelphia.

Dr. Eben D. Kanagan of Charlevoix and Dr. Joseph Heitger have been appointed assistant physicians at the State Asylum in Kalamazoo.

Dr. H. Van D. Robinson of Muskegon has returned from a trip abroad.

Dr. Mary Willard of Detroit has moved to Cleveland and will take up lecture work.

The following physicians are abroad: Dr. Charles D. Aaron, Dr. Florence Huxon, Detroit;

Dr. G. F. Baueh, Lansing; Dr. James Hyslop, St. Johns; Dr. F. H. Callow, Mt. Morris.

Dr. E. P. Lockart of Iron Mountain has been appointed surgeon for the Wisconsin & Michigan Railroad.

Dr. J. J. MacNett of Traverse City has returned home after a course of post-graduate work in Chicago.

The Escanaba Physicians' Club has elected the following officers: President, Dr. Michael P. Fenelon; Vice-President, Dr. Harry W. Long; Secretary, Dr. Wm. A. Lemire; Treasurer, Dr. Ferris Summerbell.

Small-pox has been reported in Atlantic, Jackson and Calumet.

Dr. J. B. Kennedy has been elected vice-president of the Detroit Board of Health.

Dr. W. P. Manton is chairman of the Section of Obstetrics and Gynecology of the A. M. A. for the ensuing year. Dr. J. H. Carstens is the Section's delegate to the House of Delegates. Dr. B. R. Schenek is one of a committee to co-operate with the general committee of the Association on Nomenclature and Classification of Diseases.

Michigan was represented at the meeting of the American Medical Association by a large number of members. The registration from our state numbered 322 and we were also well represented on the program there being 17 essayists from the state.

"Dr. James' Headache Cure" is the latest nostrum to be widely advertised in Detroit. Look out for cases of acetanilid poisoning from its use.

Drs. A. N. Collins, F. B. Tibbals and J. D. Matthews took a western trip after the Manistee meeting, spending some days at the Mayo clinic, in Rochester.

The National Volunteer Emergency Service, instituted in 1900, has recently been re-organized by the election of Dr. James Evelyn Pileher, the distinguished editor of The Military Surgeon, as its Director General, and Dr. F. Elbert Davis, of New York, as its Adjutant General. Its work will be conducted along military lines, the details being worked out in three separate corps, a First Aid Corps, a Public Health Corps, and a Medical Corps—the latter consisting of physicians, with rank from lieutenant to colonel, according to length of service, to whom are afforded special opportunities for emergency training. It includes among its personnel a large number of notable

personages, and is rapidly extending its membership throughout the country. Full details regarding the service and its great work may be obtained by addressing Director General Pilcher at Carlisle, Pa.

Marriages

Dr. A. W. Row and Miss Elinor T. Schulte of Marine City, June 3.

George B. Lowrie, M. D., and Miss Marie Fowler Weeks, both of Detroit, at the home of the bride's sister, Mrs. Hal C. Wyman, June 17.

Deaths

Lorenzo S. Putney, M. D., once a practitioner in Ann Arbor and later in Sturgis, but for the last ten years a resident of Norfolk, N. Y., died in the latter place, of pneumonia, aged 65.

Mary Clark, M. D., a practitioner for 40 years in Battle Creek, died on May 31, after a long illness.

Samuel Kitchen, M. D., a well known practitioner of Saginaw, died suddenly on June 9, of heart failure, aged 76.

Frederick P. Anderson, M. D., of Grosse Isle, died at his home recently, aged 66.

John Powers, M. D., of Benzonia, died suddenly from cerebral hemorrhage, at his home, April 4, aged 73.

Edgar Dudley Lewis, M. D., of Otisville, died at his home, from acute gastritis, May 16, aged 60.

Mary P. Havens, M. D., died at her home in St. Johns, May 12, after an operation for gall-stone disease, aged 70.

Dr. George F. Heath, a prominent member of the Monroe County and State Medical Societies, died suddenly of apoplexy at his home in Monroe, June 16th.

George Francis Heath was born in Warsaw, N. Y., on September 21, 1850. Until ten years of age he lived there, but upon his mother's death in 1860, and his father's entering the Union army in 1861, he went to live with his uncle in Poul-

ney, Vermont. There he attended schools, public, private and commercial, and assisted in his uncle's drug store for about seven years. When nineteen years of age, he joined his father at Warrensburg, Mo. He was graduated from the high school of that city in 1871 and the same year entered advanced classes in the State Normal School. In 1872 he was appointed postmaster to fill an unexpired term, and was reappointed at its close. He gave up the position in June, 1876, and entered the drug business. In 1879 he discontinued the drug business to take up the study of medicine in the University of Michigan. He received his diploma in 1881 and in June of that year was appointed as resident physician at the University Hospital, as which he continued for three years. He resigned in June, 1884, to succeed to the practice of Dr. Charles Tracy Southworth of Monroe. He soon became a prominent figure not only in medical, but also in educational and political circles. He was one of the few Republicans who have been elected mayor of Monroe, being chosen in 1890, 1896, 1897 and 1906, besides at times holding his opponents to the scantest of margins in campaigns in which he was unsuccessful. Dr. Heath was the first president of the Monroe County Medical Society, and for the past six years has been secretary-treasurer.

NOTICE TO MEMBERS: There are still a considerable number of members who have not paid their dues to the county and state societies for 1908. To insure the success of our work, dues must be paid promptly and the limit of time has now passed. To avoid suspension and the trouble of subsequent reinstatement, county and state fees should be sent to the county secretary before August first.

County Secretaries: Please forward all names promptly. Members not in good standing will be dropped from the mailing list and their names sent to the A. M. A. as ineligible for membership in that society. This will be done September first.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Eberth Bacilli in the Blood of Persons Not Sick with Typhoid.—In view of the great importance now attached to blood cultures in the diagnosis of typhoid, BUSSE's observations are peculiarly interesting. He first observed the condition in two patients suspected to be suffering from typhoid, where positive blood cultures seemed to confirm the diagnosis. One developed a roseolar eruption, but the Widal reaction did not appear at any time in either case. Both came to autopsy, and were found to have had diffused miliary tuberculosis, with intestinal ulceration. There was no indication whatever post-mortem of concomitant typhoid. The identification of the bacilli is said to have been unquestionable. There was nothing in the history of either case to indicate that the patient might recently have passed through an attack of typhoid. The findings in these two cases led BUSSE to look for the same condition in other patients not suspected to have typhoid. Two more cases were found—one that of a woman with acutely progressing tuberculosis, with intestinal involvement, in which the diagnosis was confirmed at autopsy, and the other that of a man with croupous pneumonia, who had a diarrhea early in the disease. It is not impossible that this last patient might recently have had typhoid. BUSSE thinks the most probable explanation of these cases to be that the patients were "typhoid carriers," and that the diarrhea or intestinal ulceration made possible the passage of the bacilli through the intestinal wall and into the blood stream. He cites one other recorded case, and suggests that many more might be found by looking for them.—*Munch. Med. Wochenschr.*, May 26, 1908.

The Use of Serum in Scarlet Fever.—CUMPTON reports his observations on a series of cases of severe scarlet fever treated with a polyvalent serum prepared by Burroughs and Wellcome by immunizing horses to a mixture of strains of streptococci cultivated from the throats of scarlet fever patients. He divides these severe cases clinically into "toxic" and "septic"—the "toxic" being those which present the ordinary symptoms of scarlet fever in an exceptionally high degree, and the "septic" those which show the well-known

results of streptococcus invasion—cellulitis, ulcerative pharyngitis, etc. The toxic cases were not distinctly improved by the use of the serum. In the septic cases, on the other hand, the percentage of recoveries was better than usual in a series of such severity, and CUMPTON thought he could see also, in the cases that did recover, a marked improvement in symptoms following the injections. Delirium was lessened, temperature lowered, facial swelling was diminished, the muco-purulent pharyngeal and nasal discharge decreased or stopped, and gland suppuration seemed at times to be prevented—results very similar to those described as following Moser's serum.

The average dose of the serum was 50 c. c., given usually subcutaneously, though in four cases where the injections were made into a vein the results seemed more rapid and satisfactory. One patient had an unpleasant reaction with rigor and high fever. Three developed abscesses at the site of inoculation. As with anti-diphtheric serum, results were better the earlier the serum was used.—*Brit. Med. Jour.*, May 30, 1908.

Posture in Treatment of Pulmonary Tuberculosis.—WISE describes a method used by himself in a number of cases, with the idea of facilitating drainage from the lungs, and bringing about passive hyperemia of the apices. He has a sort of couch made, on which the patients lie face down for a certain time each day, the body forming a double inclined plane with both head and feet lower than the hips. This is said to be more comfortable than the ordinary practice of raising the foot of the couch or bed, and to be in fact, distinctly pleasant. Results are said to be distinctly good in the way of facilitating the emptying of cavities, relieving cough, and at times influencing favorably temperature, and with it appetite and nutrition.—*Lancet*, May 30, 1908.

Calcium Chloride in Melena Neonatorum.—LEGGE reports a severe case of melena neonatorum, in which in the course of 36 hours he gave 20 grains of calcium chloride. The child recovered, and LEGGE attributes the result to the treatment, as the prognosis at the outset was distinctly bad.—*Brit. Med. Jour.*, May 16, 1908.

SURGERY

Conducted by

MAX BALLIN, M. D.

The Value of Enterostomy and Conservative Operative Methods in the Surgical Treatment of Acute Obstruction.—The operative indications in acute obstruction of the bowels are two-fold, the relief of the obstruction, and the withdrawal of the retained and poisonous intestinal contents. In many patients the operation for obstruction is well borne, but death occurs after a few hours, from rapid resorption of the toxic substances. Many operators therefore empty the distended gut by aspiration or incision. The author thinks it advisable in patients whose strength is at all diminished, to simply open the bowel above the obstruction and drain—enterostomy—and to leave the final removal of the obstruction for a secondary operation. Enterostomy and drainage should be the operation of choice, not only in desperate cases, but also in many patients whose condition is still a fair one. Prolonged search for the obstruction and its relief should in all patients except in those in very good condition be delayed until the acute symptoms have been relieved by the opening and drainage of the bowel. When gangrenous intestine is present, it is better to bring it outside of the abdomen and deal with it later; the obstructive symptoms being meanwhile relieved by enterostomy. The enterostomy alone may in some cases relieve permanently intestinal obstruction. Fecal fistulas will remain in only a small proportion of the cases, in which enterostomy has been done. The enterostomy should be done according to the principle of Kader's Gastrostomy (small incision and sewing in of rubber tube in intestinal wall).—CHAS. ELSBERG, *Annals of Surgery*, May, 1908.

Hemorrhages from the Stomach and Duodenum.—Many surgeons believe that in hemorrhage from the stomach gastrojejunostomy is efficient as a curative agent without direct attack upon the bleeding vessel. MAYO agrees with this opinion only as regards small and moderate hemorrhages. In cases of severe bleeding from prepyloric and duodenal ulcers, gastrojejunostomy may prove inefficient (3 cases of severe hemorrhage continuing after gastroenterostomy are reported). In connection with the gastrojejunostomy, if an ulcer exists in the stomach it should be excised if possible. When this is not feasible the main blood vessels leading into it should be

ligated and the peritoneum and muscular coats drawn over it. Excision however is the best procedure as it gets rid of the disease and prevents a possible secondary cancerous degeneration. Bleeding ulcers which lie a considerable distance above the pylorus should be excised. In extensive ulcers, such as the hour-glass variety, this may amount to resection in continuity. In doing this resection much deformity may result from the plastic closure of the gap produced by removal of the ulcer and should the deformity interfere materially with drainage through the pylorus, gastrojejunostomy in addition may be required. In hemorrhage from duodenal ulcer ligation of the blood vessels and closure of the outer coats over the indurated area with gastrojejunostomy will be found efficient. For severe hemorrhages from the stomach in those cases in which no ulcer can be located from the exterior, the anterior wall of the stomach is opened by a longitudinal incision and by counter pressure successive areas of the mucous membrane are presented at the opening until the bleeding point is detected. With chromic catgut on a small curved needle the hemorrhage area is sutured from the mucous side. Over this on the peritoneal side a few line sutures are introduced for protection, after which the working incision of the stomach is sutured in the usual manner.—WILL J. MAYO, *Surgery, Gynecology and Obstetrics*, May 1908.

Treatment of Gonorrhoeic Arthritis with Bier's Hyperemia.—The treatment of gonorrhoeic arthritis by means of hyperemia means a great progress. The author leaves the bandage for congestion for 20-22 hours during a day and continues this treatment for 1-3 weeks as needed. Proper care of skin, changing the place where the bandage is applied, putting cotton under the constricting rubber bandage and powdering of the skin will prevent blistering. The results of this treatment are: relief of pain and milder course of arthritis. Movements of the affected joints can be practised early and therewith functional results will be better. In fact in the 40 cases the author reports as treated after this Bier's method, not a single one terminated in ankylosis.—BAETZNER, *Deutsche Zeitschrift fuer Chirurgie*, Vol. 93, Part 1.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Localization and Clinical Symptoms of Intracranial Hemorrhage in the Newborn.—SEITZ's material consisted of 23 cases. At autopsy the development of artefacts was avoided by making gross frozen sections of the head. The hemorrhage was regularly venous in origin and practically always between dura and pia. In subtentorial bleeding the quantity of blood was always small—tea to tablespoonful. The symptoms are quite characteristic, the children not being born asphyctic, remain normal for a few hours, are always quiet and then slowly show signs of bulbar compression—irregular, shallow, choppy respiration, and bluish yellow tint. They resemble cases of atelectasis. Death occurs in 24-48 hours.

In supratentorial bleeding, which usually is unilateral, no abnormal signs are noted on the first day, but on the second a characteristic restlessness and continuous crying develop. Later compression symptoms, chiefly respiratory, coma, etc., appear. Local signs due to motor irritation and later paresis are seen, referable chiefly to the facial, leg and arm centers. The fontanelles bulge, and as the congestion increases the general brain symptoms overshadow the local ones and serve to unsettle the localizing of the lesion. Death most commonly occurs on the fourth to eighth day. Although the skull of the newborn permits of a certain amount of increase of the intracranial contents, it becomes as inexpandible as that of the adult when this limit has been reached; therefore progressive signs of pressure indicate operation. Seitz operated upon one case, relieving a supratentorial hemorrhage, but the child succumbed to a not diagnosed intratentorial hematoma.

Of the 23 cases, 5 recovered, and of these all had supratentorial hemorrhage; 3 recovered completely. Therapeutically, avoidance of all external stimuli (place in the incubator), small doses of bromide ($\frac{3}{4}$ grains), cold applications to the head and feeding by gavage are indicated. If the symptoms are purely local non-interference

should be practiced; if progressive and general, an exploratory craniotomy is proper. Subtentorial hemorrhage is not amenable to surgical interference and lumbar puncture affords but transitory relief. Of the 23 cases, 6 were spontaneous and easy labors, so that the forceps should not always be blamed. This mode of death is of forensic importance, as apparently healthy children may die suddenly and mysteriously. Seitz mentions Cushing's results of 4 operations with 2 recoveries.—*American Journal of Surgery*, May, 1907.

Primary Carcinoma of the Female Urethra.—At the meeting of the American Surgical Association, McMurtry reported two cases of this comparatively rare condition and reviewed the 27 cases in the literature.

In both the disease originated in the urethra. Both patients were treated by complete excision of the urethra down to the sphincter muscle of the bladder. In one case there was recurrence during the first year, rapidly extending to the base of the bladder, the perivesical tissues and inguinal glands. Further operation was not permitted. In the second case, the pathologic process was in its incipency; the urethra was excised as indicated; prompt healing followed with perfect control of the bladder and there has been no recurrence one year after operation. Dr. McMurtry claims that early diagnosis of the condition is difficult because of the resemblance of the initial lesion to urethral caruncle. He also directed attention to the difficulty of differential diagnosis from syphilitic lesions in the same location. The prognosis and treatment are the same as for carcinoma in other parts of the body. The great desideratum for successful treatment is routine examination of all patients applying to the physician with painful micturition, early diagnosis of malignant types of disease, with complete excision in that early stage of invasion when permanent cure is possible.—*J. A. M. A.*, June 20, 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

Blood Cultures in Typhoid Fever and Comments Upon the Hospital Treatment.—Recent observations have proven that typhoid patients may be infective in the prodromal stages, inasmuch as the bacilli have been recovered from the stools and the blood before the real illness developed. The Widal test does not usually appear until the second week, but in 90% of cases of typhoid the blood will show the bacilli in the first week, though the percentage decreases later. The wide adoption of blood culture methods has been prevented by their difficult technic, but recent simplification has rendered them more practicable. JOSLIN and OVERLANDER in Boston made blood cultures in 45 cases of fever, using the following technic: Normal ox-gall was collected in a sterile flask immediately after the creature's death, and transferred to test tubes in quantities of 5 c. c. each. These were sterilized at 100° C on three successive days, under a pressure of 10 to 18 lbs. The patient's arm, over the median cephalic vein, was scrubbed with soap and water, and alcohol, then poulticed with bichloride 30 minutes. Five to ten c. c. of blood were removed in each instance, of which 2½ c. c. were placed in each of two tubes of bile medium. The rest was saved for histological study and Widal reactions. The inoculated tubes were incubated ten hours and then four loops from each tube were transplanted to two plain bouillon tubes, and examined in twelve hours, and, if negative, at later periods up to 72 hours. Motility was not regarded as a safe guide to identification, but the bacilli were tested with a typhoid serum of known agglutinating power. The organisms were always found in pure culture.

Of the 45 cases, 15 proved not to have typhoid, judged by the usual criteria as well as blood culture. Of 30 cases of typhoid, 21 cultures were positive. It is known now that severe cases are more likely to give positive cultures than mild ones, the severity being determined by the general condition of the patient. The cultures were taken in severe cases on an average by the eleventh day, moderate ones on the twelfth, and mild ones by the sixteenth, hence it is probable that several mild ones may have been missed, be-

cause of the failure to take cultures earlier in the disease.

The authors conclude that typhoid can generally be diagnosticated in the first week by the use of blood cultures, but in only 60% in the second week; that the test is valuable in detecting relapses; that it is useful in prophylaxis, by enabling the proper precautions to be taken at an early stage of the disease.—*Boston Medical and Surgical Journal*, May 7, '08.

The Origin of Urinary Casts; an Experimental Study.—R. M. SMITH reports experiments upon rabbits in the effort to throw light upon the manner of formation of casts. Different irritant agents, which are known to cause nephritis, were successively used, viz., uranium nitrate, potassium bichromate, arsenic, cantharidin and trypan red. The uranium nitrate gave the most typical and constant results. It was first ascertained that the animals had no albumen or casts in the urine, and then the urine was collected constantly, and analyzed daily, with special reference to albumen and casts.

It was noted that the first casts to appear were always of the fine granular variety, and the hyaline casts appeared later. There was a tendency for the casts to come in showers—many one day and none the next.

Those urines containing many casts usually showed a correspondingly large amount of albumen, but when the kidney lesion was chiefly glomerular, the casts were few in proportion to the quantity of albumen. Sectional studies of the kidneys were made from freshly killed animals after varying dosages of the irritant.

Histologically, the first change to appear was a swelling of the cells of the distal convoluted tubules, with an obscuring of their boundaries and of the tubular lumen. The straight tubules were similarly, though much less, affected. A continuation of this process resulted in a marked degeneration of the cells with the formation of a granular necrotic mass, which is gradually forced along the tubule by the pressure of urine, losing its granular character until it is finally homogenous and hyaline.—*Boston Medical and Surgical Journal*, May 7, '08.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Results of Operation on the Kidney for Calculus and Tuberculosis.—McCOSH reports having performed fifty-four nephrectomies, nineteen of these for tuberculosis. There were no fatalities due to shock. Two patients died within a few weeks after operation. Eight patients died at periods of from one to three years after operation. Five patients have made a perfect recovery, and now enjoy excellent health at periods varying from six to nineteen years after operation. In three hundred and thirty cases of nephrectomy which he had collected there were about 20 per cent of permanent cures.

He had performed forty-five operations for renal calculi. In this paper the septic kidneys, or those in a condition of pyonephrosis were excluded from consideration. Fifteen nephrolithotomies had been performed by him. Twelve of these patients were perfectly well at the present time. It was a question with him whether the stone should be extracted through an incision in the parenchyma of the kidney or through one made in the renal pelvis. He had never been inconvenienced by excessive hemorrhage and he was inclined to prefer the extraction of the stone through the kidney, rather than by an incision in its pelvis.

While these cases are not sufficiently numerous to throw much light on this question, yet it is suggestive that in five patients where the incision was made in the pelvis, leakage occurred in four. In six cases where incision was made through the kidney itself, leakage occurred in one only. It is not quite fair, however, to judge from these figures that leakage of urine is less apt to follow incisions in the kidney than those in the pelvis, because in several patients the wound in the pelvis was but lightly sutured in anticipation of future need of external drainage, whereas the wound in the kidney was always thoroughly closed by suture. It is his impression, however, that there is less danger of leakage when the stone is extracted through the parenchyma of the kidney.

In the majority of patients with renal calculi either the pyelitis is so severe or the kidney itself is in such a state of advanced pyonephrosis that

all question of closure of the kidney is at once settled. External drainage is necessary. There are, on the other hand, patients in whom the kidney itself appears comparatively normal and where the pyelitis is comparatively slight. Drainage seems, under such conditions, to be quite unnecessary. We will always, however, encounter a few cases where it will not be easy to decide whether or not to employ drainage. In all cases we must be sure that the ureter is patent. Drainage is indicated if there be any sign of disorganization of the kidney itself, if the calyces be much distended, if the urine should have been loaded with pus prior to the operation, if there should have been at any time fever or signs of sepsis, if much damage has been done to the kidney during the extraction of the calculus, and if there should have been crumbling of the calculus during the process of its extraction—as under these circumstances some small fragments might have been left behind in the calyces. Should there be doubt as to the wisest method of procedure, a compromise may be made and the kidney lightly sutured with fine (00) catgut. Should the inflammation of the pelvis be so severe as to demand drainage, nature will come to its relief and burst open the sutured kidney, as occurred in one case.—*Annals of Surgery*, June, '08.

Nephrolithiasis.—BARROW report a case of kidney stone successfully removed at operation, weighing one pound and two drachms. The patient was a man of 48, who had had symptoms from the age of eight, and had on this account never been in good health more than a few months at a time. At the age of 14 he had chills and fever for a year, not affected by quinine. At the age of 20 urinary symptoms first appeared, with painful micturition and turbidity. After 30 the attacks of pain became more frequent, and for ten years before operation he had been practically an invalid. At operation a nephrectomy was done, as the kidney was much degenerated. The man was cured and has been in good health and able to work for two years.—*Annals of Surgery*, June, '08.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

The Diagnosis and Treatment of Syphilitic Lesions of the Nervous System.—The importance is urged of as early diagnosis of these lesions as is possible since the greatest benefits are promised only by early therapeutic measures. Happily, in but a few of those infected do lesions of the nervous system follow. Certain infections and perhaps certain families seem to present unusually numerous instances of nerve lesions, due probably to a virulent infection and weakened resistance of nervous structures.

These tissues may be attacked almost immediately or only after many years. Pathologically, there is always a round-celled infiltration about the blood-vessels and in the pia—a secondary endarteritis and permanent thickening of the meninges. Rarely small gummata are found, but these less commonly than is supposed. More rarely still the substance of brain or cord is involved. If many years after the infection, there is usually sclerosis of vessels, thickening of meninges, sometimes gummata, but it is principally to the results of endarteritis that symptoms are due. There are, however, other gradual changes in nervous structures thought to be the results of toxins.

Among the earliest symptoms is a sudden myelitis, usually of lower thoracic or thoracic-lumbar region with loss of power in both limbs, loss of bladder and rectal functions, and sensation. Girdle sense and pain may also be present. Even in the midst of treatment, diffuse symptoms, the result of multiple lesions of brain cord, may appear, with irregular motor and sensory involvement in addition to meningeal symptoms. Hemiplegia from early endarteritis is also a common and early symptom. Meningitis of the base is most severe about the chiasm and hence the common involvement of the optic, oculo-motor, and sixth nerves. Disturbance of the reaction and regularity of the pupil is one of the most common and constant features. Oculo-motor palsy unilateral in type occurs most frequently and has been called the sign-manual of cerebral syphilis.

Owing to the meningeal involvement of the cord being greatest in its posterior portion, girdle sense and pain are common symptoms. After the fifth year either brain or cord symptoms are apt to predominate. It is in the period of round-celled infiltration that treatment avails much and this should be vigorously mercurial. More is to be hoped from mercury than from iodides.—T. H. WEISENBURG in *Amer. Jour. Med. Sci.* for April, 1908.

Subacute Combined Cord Degeneration.—Since 1887, these cases have been reported under

various names. Their principal symptoms are: (a) sensory, due to posterior tract degeneration, and (b) motor weakness and spasticity due to pyramidal tract degeneration and later flaccid paralysis, owing to anterior horn degeneration. One of its earliest manifestations is impairment of subjective sensation in the lower extremities. Tingling, numbness, or prickling in feet or calves is complained of, as also often a dull ache in lower spine. A paresthesia confined at first to the lower extremities may sooner or later involve hands and fingers. Girdle sensation and neuralgiaform attacks sometimes appear. The superficial reflexes and the light reflexes show no characteristic changes. The tendon reflexes are usually exaggerated and ankle clonus, Babinski reflex, and Gordon's paradoxical reflex are common. The lower extremities become gradually spastic, the patient finally has to take to his bed and a complete paraplegia is developed. Varying degrees of anesthesia, analgesia, and thermo-anesthesia and loss of muscle and joint sense ensue. Sphincter disturbances are usually slight. The cranial nerves are practically never afflicted.

Anemia is most common and after a period of six months to six years, the terminal stage of short duration is entered when the deep reflexes are abolished and sphincter paralysis appears—some intercurrent trouble terminating the scene. Three stages have been named, characterized by (1) ataxia with slight spasticity, (2) increased spasticity, (3) flaccidity and complete paraplegia. The course varies from one and a half to five years, and is progressively downwards. Prolonged remissions but no recoveries have been observed. Three groups of cases have been noted: (1) those in which pernicious anemia was constantly present; (2) cases in which grave anemia, not of the pernicious type, was at some time present, and (3) cases in which the anemia was a minor and insignificant matter. He then cites sundry cases and reviews the subject, finding no strict conformity to the systemic type of generation. Easily, perhaps, to be confounded with tabes, the later detection of muscular weakness, exaggerated reflexes and Babinski's toe sign will exclude tabes. The absence of sensory symptoms in lateral sclerosis and their invariable presence in spastic paraplegia will exclude these. Friedreich's disease is likewise excluded. Certain types of spinal syphilis are most likely to be confounded here. Prognosis is uniformly bad. The faradic brush, the Pacquelin cautery, warning against fatigue, tonic and hygienic measures, make up the treatment.—JULIUS GRINKER in *Jour. Amer. Med. Ass'n* for April 4, 1908.

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SOME PROBLEMS IN PREVENTIVE MEDICINE*

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Theoretically, all disease is preventable. A perfectly made human being, who lives in harmony with the laws of nature, ought to die a physiologic death at a ripe old age. Theoretically, then, the scope of preventive medicine is limited only by the extermination of all disease and the establishment of universal health. That this ideal state of affairs will ever be realized, no one dares to hope. That it shall be more closely approached than obtains at the present time should be the aim of the medical profession.

There is a steadily growing interest manifested both by the profession and laity in matters of public health. This interest has been long in awakening. Until recent years, national activity in hygiene has been aroused only by special exigencies such as the visitation of some devastating plague or epidemic.

The United States government was nearly one hundred years old before a National Board of Health† was established by Congress, and even then "the chief motive power in determining its action was to provide against such sacrifice of life and destruction of material interests

as rendered a recent epidemic of yellow fever a National calamity."

This Board died as a result of internal dissensions after a few years of stormy existence. The earlier State Boards of Health were organized and conducted their operations against bitter opposition. The New York State Board of Health was born after fifteen years of travail. Our own most excellent Bureau of Health came into existence under similar unfavorable auspices and has had to fight for its very existence through almost every session of the Legislature since its organization. To-day, however, there is a healthy and growing sentiment in favor of enlarging the functions and usefulness of these public bureaus and of demanding that the National Government shall take an active part in elevating the standard of National health and morals.

The present attitude of some of our State governments, notably Massachusetts and Pennsylvania, who have appropriated hundreds of thousands of dollars to the educational campaign against tuberculosis; the founding of heavily endowed institutions for the sole purpose of investigating the causes of diseases, and the means for their prevention; and the work of the

*Presidential Address at the meeting of the Michigan State Medical Society in Manistee, June 24 and 25, 1908.
†Nat'l Bd. of Health Circular, April 7, 1879.

various social and philanthropic organizations toward the solution of certain social problems that tend to lower the standard of public health, such as poor housing and food, the pollution of natural sources of water supply, child labor, etc., indicate the present status of public opinion on this subject, and augur most favorably for the future. Aside, however, from moulding public opinion, which of course is the most important thing, comparatively little has been accomplished. Our efforts have been rather desultory in character. We have attacked this problem and that. We have organized societies for the prevention of tuberculosis, for the eradication of social diseases, etc., instead of organizing our forces and concentrating our energies upon some systematic scheme by which all these problems may be worked out.

A successful solution of the public health problem requires, first, knowledge of present conditions. Second, the causes of these conditions. Third, the removal of preventable causes.

What are the present conditions? Heretofore our judgment on this point has been based largely on mortality statistics; the efforts of preventive medicine have been practically limited to the control and prevention of epidemics, the limitation of contagious diseases, and the investigation of the specific or exciting causes of those diseases that cause the greatest number of deaths, while relatively little attention has been given the more important side of the question—the individual defensive barrier against disease.

At the present time it is accepted as axiomatic that there is nothing so essential to the integrity and permanence of the nation as a healthy population. **"The family is the integral formative unit of the nation."* Whatever tends to lower the standard of health and morals of the family must in some measure weaken the whole social fabric. There are perhaps conditions existing to-day that should

*E. Mulford.

rouse every thinking person to inquire whether the average family is fitted to perpetuate a stronger or weaker race, whether the standard of National health is being raised or lowered. There are certain physical, nervous and mental affections that are commonly recognized as degenerative diseases. These are insanity, epilepsy, idiocy and imbecility, criminality, inebriety, and tuberculosis. Their victims are pronounced by scientific and public opinion as unfit to perpetuate a healthy race of people. Special institutions for each group have been constructed and maintained at public expense, partly for their treatment, but largely for their segregation. There are in the United States to-day more than two hundred thousand insane, three hundred thousand feeble-minded, one hundred and fifty thousand epileptics, an equal number of criminals and eleven million consumptives. It will be seen then that the degenerative class represents about 14 per cent of the nation's population. If to these be added the neurotic, semi-insane and the semi-responsible, such as are described by Grasset in a recent work, whose number cannot be estimated, it will be seen that the representatives of the degenerate class constitute a formidable portion of the population.

The foregoing statistics seem discouraging. It is the kind of statistics that is usually employed by the melancholy and pessimistic to whet their morbid tendencies and to form a basis for gloomy forebodings of the Nation's welfare. Fortunately, however, the outlook is anything but hopeless. There is no class of diseases that invites the attention of preventive medicine with brighter promise than the so-called degenerative diseases.

What are the causes of these conditions? Consensus of opinion places heredity as the chief cause. Its role as an etiological factor is variously emphasized by different writers, usually the most forceful language being used to express their opinions.

Thus, it is described as the "corner-stone of the edifice," "the great force which governs the world," "the cause of causes."

Far be it from me to minimize the importance of heredity as an etiological factor. On the contrary, there is no question in preventive medicine that requires more careful investigation. There is no question on which the laity should be more thoroughly informed.

There are, however, certain popular misapprehensions concerning its role that need to be corrected. In the first place, we should protest against the usual gloomy interpretation of the term. There are certain people who predict through it either the extinction of the race or its culmination in a race of lunatics and imbeciles.

In my opinion, heredity is entitled to less prominence than it receives. We are accusing it of much that should be attributed to accidental causes, to ignorance, faulty education and training, and to bad environment. Before deciding that any disease or constitutional defect is inherited, we should exclude other possible causes.

An epileptic child of an epileptic parent has not necessarily inherited the epilepsy. *Sachs directs attention particularly to the fact that "cases of hereditary epilepsy are not nearly so frequent as they are supposed to be. If we examine carefully into the early history of our cases, one finds frequently that the child has either sustained some traumatic injury to the brain or has acquired some cerebral lesion early in life."

So, too, the child of a neurotic parent is quite apt to be brought up in an environment and subjected to influences that would interfere with his normal development independently of his heritage. †Paton says that "investigation in this subject must necessarily deal with a number of indefinite factors. What is born with the individual? What happens to him after birth?"

Erroneous interpretation of statistics is easy, and writers who try to make statistics

harmonize with or substantiate pre-formed theories, are apt to convey to the public mind wrong impressions on this most important subject. As an example, the statistics of asylums in Michigan show the existence of insanity or some other degenerative taint in the ancestry of 35 to 40 per cent of the patients. The ordinary interpretation would be that these figures represent the percentage of cases that inherit the disease or a predisposition to it.

Koeller* examined the family histories of 370 sane individuals and found evidence of mental deterioration among the progenitors in 59 per cent of the cases.

In the second place, morbid heredity is preventable; because a vitiated constitution, able or liable to transmit its defects to successive generations, is primarily acquired from causes that are preventable. Each new generation furnishes its quota of new victims of the errors of living, to become the founders of a new race of degenerates.

The popular conception that the question of race deterioration is to be entirely or even largely solved by emasculating or interdicting the marriage of the unfit is irrational. The profession and the public must not lose sight of the fact that through errors in living, we are constantly producing the unfit, and so long as our present social conditions exist, and the present ignorance and indifference of the masses in matters pertaining to hygiene continue, we might exterminate every degenerate on the face of the earth with the certainty that the history of decadence would immediately begin to repeat itself and a few generations hence find matters about as bad as they are at the present time.

Finally, morbid heredity does not express a hopeless condition. The tendency of nature toward regeneration is well known, and if this fact were given as much prominence in medical literature as the other side of the question, the popular view of morbid heredity would be consid-

*Nervous diseases of children. Sachs.

†Psychiatry. Paton.

*Psychiatry. Paton.

erably altered.

*Urquhart, in considering "the question of regeneration at its worst," collated statistics showing that 38 neuropathic fathers had 240 children; 47 per cent were sane, 29 per cent insane. Forty-five neuropathic mothers had 239 children; 42 per cent were sane and 39 per cent insane." He also recorded "those most heavily burdened" and the "double heredity" shown in families of 28 neuropathic fathers and mothers, 145 children, of whom 33 per cent were sane and 44 per cent were insane." And, commenting further, says: "Even in this last class the efforts of nature toward regeneration are obvious."

This more hopeful view of heredity finds abundant support in literature. I quote the following: "Heredity is not itself certain and constant in its results." "The partisans who are most convinced of morbid heredity recognize that the transmission of pathological characteristics is not fatal." "The law of heredity is not inexorable" (Grasset). "Heredity is a prophecy of what may be and not a destiny which must be."

When we can bring to nature's aid the assistance of an enlightened public, we shall have solved the question of heredity in its relation to public health.

Primarily, then, the chief causes of decadence are: First, those conditions that interfere with healthy physical growth and development; second, faulty education and training.

For convenience, the first of these may be divided into causes incident to the period of gestation of the mother; causes incident to the birth of the individual and those that operate subsequent to birth. The first class of causes takes into consideration the emotional disturbances of the parent during her pregnancy, and all those conditions and circumstances that may affect the nutrition of the child during its prenatal development. These include fright and other emotional shocks, insufficient and

improper nutrition of the mother, as often the result of luxury as of poverty or hardship.

The causes that operate at birth are prolonged and difficult labor and the unskillful use of the forceps. Sachs attaches considerable importance to difficult labor and unskillful use of forceps as causative factors in infantile palsies, and thinks that many such conditions could be avoided by the proper management of labor.

Causes that operate after birth are legion. Improper diet, bad air, unhygienic environment and neglect during infancy not only swell the death roll of this fatal period of life, but become most important predisposing factors to nervous and mental upset later in life.

In addition to causes affecting the nutrition of the child may be mentioned those that directly affect the nervous system, such as fright, undue excitement, etc.

*Holt calls attention to the "steadily increasing frequency of functional nervous diseases among young children" and "the injury done to them ignorantly, by playing with infants, stimulating them to laughter, and exciting them by sights, sounds and movements, until they shriek with apparent delight."

It is in the early period of development of the nervous system that healthful or unhealthful influences make the most profound and permanent impression. A nervous instability once established, the child becomes an easy victim to those exciting influences that tend to the arrest or perversion of mental development. Morbid appetites are developed and there is a precocious awakening of the sexual passions, leading to masturbation and other sexual perversions. When the age of puberty is reached, the already depraved constitution finds itself unfitted for normal adaptation to the physiologic changes incident to this period.

Of equal importance to the physical development of the child is his education,

*Jour. Mental Science. Vol. 50.

*Infancy and Childhood. Holt,

If the "health of the people constitutes the nation's greatest asset," surely this fact should be made the basis of our public educational system. From the time that the child enters school he should be constantly taught and trained in those things that are essential to normal healthy development. There is no adequate provision for this kind of instruction and training in our public schools. The present status of the science of pedagogy practically prohibits the proper presentation of these subjects. Teachers of the youth are drawn from universities, colleges and normal schools, whose requirements for graduation do not include training in these branches. Their optional courses on these topics are inadequate and insufficient and comparatively few avail themselves of them.

Hence, practically none of the teachers in our public schools are equipped to give instruction in what ought to be and what is destined to become this most important part of the child's education. Furthermore, there are among the teachers of our city schools a goodly number of Christian Scientists. There are some who employ osteopaths, mind healers, and patent nostrums for their own physical ailments, and it is from this class that we expect to get intelligent co-operation in advancing school hygiene.

The concomitant development of mind and body in our public schools is of such very great importance that only those who are equipped by education to accomplish these results should be employed as teachers.

Of equal importance is the question of over-pressure in schools. "Pupils of unequal mental capacities and powers of endurance are permitted and even compelled to enter the same race and made to feel that failure means disgrace with the result that the weaker often fails and becomes a mental nervous wreck. Oftentimes the fault lies with the parents who are somewhat ambitious and who spur

their children to accomplish impossible things, failing to recognize their inability to cope with others of the same age."

Furthermore, the curricula of public schools are so arranged as to bring the greatest amount of work at a period of life when the nervous system should be subjected to the least strain. Both public educators and parents need to be impressed with the fact that puberty is one of the great danger periods in the development of the child.

The remedy is more easily suggested than applied. The solution of the public health problem must come through the medical profession. It requires, first a broader education of the profession itself in sanitary science, and a closer knowledge of social conditions and their effect on the health of the masses.

Second, the education and enlightenment of the public.

Third, suitable legislation.

The medical profession itself is not sufficiently enlightened on this subject. As suggested elsewhere, its ideas of prophylaxis are largely based on the specific or microbic causes of diseases and the important part that immunity plays is not sufficiently realized. The profession needs also to come in closer touch with existing social conditions. The Johns Hopkins Hospital began years ago to interest medical students in social service by way of frequent visiting among the poor. Last year it opened a Social Service Department in the Dispensary of the hospital. The object of it is to enable the student to see how the poor live and must meet their problems.

Furthermore, the profession needs to know more about the causes of insanity, which is one of the afflictions with which preventive medicine must deal. The State of Michigan is to be commended for the advanced stand it has taken in establishing a psychopathic ward, in connection with the medical department of the University of

Michigan for special instruction in the causes, prevention, and treatment of this affliction.

The chief obstacle, however, that confronts preventive medicine is man's ignorance of his own body, its structure, functions, and what is necessary to keep it in healthy condition. This ignorance must be met by a well-organized educational campaign. The most important step taken so far by the organized profession in this country in the interest of public health has been in the establishment of a bureau of public instruction in connection with the American Medical Association, whose object it is, as expressed in the minutes of the Atlantic City meeting in 1907, "to secure the co-operation of the press and of public educators in supplying the community at large with established facts regarding matters of general moment and public health. To supply these facts ethically, in good taste, and without the element of individual advancement. To harmonize and give the added value of combined effort to the several interests which are now working independently for the common good along medical lines. To direct this work under the auspices of the American Medical Association, thus giving unity of purpose among the workers and public expression to the aim and aspirations of the National Association. Such a bureau connected with our State Society would find a wide field of usefulness.

Public education, however, is not alone sufficient. Social conditions have for so long been adjusted to meet the requirements of commercial interests without reference to the requirements of health that we must seek the aid of rational legislation. The functions of our bureaus of health must be enlarged and more liberal provisions made for their use in carrying on a campaign of education. The State of Michigan limits the annual expenditure of its State Board of Health to \$19,000 per year, for all purposes. The State of Michigan is expending for the care of its insane

alone more than \$1,000,000 per year. Insanity is as preventable as tuberculosis. A million dollars annually expended for the scientific investigation of the causes and prevention of diseases would eventually relieve the State of a large part of the burden of caring for its dependents.

The effectiveness of legislation always depends on the state of public sentiment. Public sentiment is molded by education and not by law. The enactment of laws in advance of public enlightenment on matters legislated, is usually taken as an offensive invasion of personal rights, and often defeats the very purposes of their enactment.

The mandates "Thou shalt!" and "Thou shalt not!" are not well received by an enlightened people. As civilization advances, legislation must needs become less and less mandatory, and partake more and more of the character of rules for guidance and convenience rather than edicts for discipline and protection.

A few years ago physicians and householders were somewhat peremptorily commanded to report cases of consumption to the Health Officer, and law was cited showing authority for the request. The principles involved were correct, but the method of application was entirely wrong. This aroused the opposition both of the profession and of the laity. To-day, as the result of a well-organized campaign of education, the public is beginning to ask for suitable legislation to assist and direct its efforts in stamping out the plague.

It is not my purpose to attempt to enumerate all the existing conditions that might be improved by legislation. The point I wish to make and emphasize is that widespread opposition to the enactment of laws in the interest of preventive medicine is positive indication that further education instead of legislation is needed.

CONCLUSION.

The points I wish especially to urge are:

1. The importance of developing a sturdier race.

2. A modification of our present gloomy views of heredity.

3. A broader education of the profession, particularly with reference to social conditions.

4. The development of the bodies as well as the minds of our children in our schools.

5. More liberal appropriations and wider functions for our boards of health.

6. A co-relation of the plans of the various organizations now working independently, into one systematic comprehensive scheme of education of the masses in those things that will tend to the elevation of the standard of national health.

THE TREATMENT OF JOINT TUBERCULOSIS*

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In considering the treatment of joint tuberculosis it will be best to divide the subject into three headings: First, to consider those measures which are essential in the treatment of any form of tuberculosis; second, to emphasize and explain the procedures which have been found to best relieve pathologic conditions in joints in general, and finally, to consider the particular requirements of the individual joint.

Under the first heading we must not forget general hygiene, fresh air and proper food. I wish to emphasize this, because, while they are generally recognized as of the utmost importance in pulmonary tuberculosis, I find that in the treatment of surgical tuberculosis they are only too often neglected. We all know how important it is to live in fresh air, and yet, how few of us are there who see to it that the rooms in which we live are properly ventilated, and how few of the cases of surgical tuberculosis have all the fresh air they need.

The impression among many seems to be that fresh air is much more important in pulmonary tuberculosis, because impure air is apt to carry germs into the lungs and thus cause secondary infection. While this is true to a certain extent, it is after all not so much the pyogenic bacteria which might come in contact with the diseased lung tissue as it is the free ammonia in the air which reduces the resisting power of the patient to combat disease. Professor Moerner, of Upsala, in some very extensive and ingenious animal experiments, demonstrated this fact very conclusively several years ago.

While in pulmonary tuberculosis sanitarium treatment seems to be much more effective than home treatment, for reasons which we need not discuss here, joint tuberculosis can be treated quite as effectively in private residences and hospitals if the subject of ventilation is given proper thought and study. An open window in a room will secure change of air sufficiently frequently to render it pure enough for all practical purposes, and when all is said and done, it is much more reliable and

*Read at the Annual Meeting of the Fifth Councilor District Society, at Grand Rapids, March 3, 1908.

effective than all the complicated and expensive systems of ventilation now recommended.

The question of diet is also of the utmost importance. A well-balanced ration properly prepared is the first requisite. This should consist of good meats, vegetables in season, a fair amount of fruit, and, in addition, the average adult patient should consume two quarts of good milk, from four to six fresh eggs daily; sugar should be given a little more sparingly than to normal individuals. In addition to the above, I have found a moderate quantity of good nuts and ripe olives a very pleasant change and a useful addition. If these are given, the less agreeable and often poorly tolerated fats, such as cod liver oil and olive oil, can often be dispensed with, to the great relief of many of the patients. Drugs, if any, should be prescribed if there is a distinct indication arising apart from the tubercular process. I suppose almost every drug in and out of the formulary has at some time or other been employed in tuberculosis, and all of them, except as above indicated, have been found wanting.

In joint tuberculosis, as in all the other forms of tuberculosis, it is of course a struggle between the individual on the one side and the infection on the other, and the whole plan of treatment consists in strengthening the defensive powers of the former by increasing its resisting power, and to weaken the latter as much as possible, and all the measures which I wish to propose have one or the other or both of these objects in view and have proven effective many times.

Incidentally I will not call attention to any measures the value of which is in doubt, because if in the treatment of any affection we divide our energies between valuable and useless remedies the interests of the patient are sure to suffer.

Within the last two years we have learned how to determine the resisting power of the patient to tubercular infec-

tion, and since this discovery has been made we have learned better and better how to increase the resisting power of the individual, because we have had a fairly accurate method of calculation. I refer to the study of the opsonic index. While this may not necessarily give us absolutely accurate information as to all the changes in the resisting power of the individual, it does give us an accurate gauge as to the phagocytic power of the organism, and this undoubtedly is one of the chief factors which determines the prognosis. There are quite a number of measures which increase or decrease this phagocytic power, the ones already mentioned all help to increase the resistance of the patient and to raise the opsonic index. The two factors which lower the opsonic index more than any others are pain and secondary infection, and consequently it is our duty to do everything we can to reduce the former to a minimum and to prevent the latter if possible.

To check pain by the use of opiates is only permissible in extreme cases, and then only for a very short time, because it interferes so seriously with nutrition, and good nutrition, as above stated, is one of our best weapons of defense. Fortunately we have a much more reliable and safe method by which to relieve pain in joint tuberculosis, namely, the securing of rest of the involved joint. This can practically always be accomplished by placing the muscles surrounding this joint in accurate equilibrium and then immobilizing the extremity. The exact position in which these joints should be held, in order that the antagonistic muscles shall be in exact equilibrium will be discussed when we come to consider the individual joints.

For the purpose of securing absolute immobilization I have found plaster of Paris and wheat gluten bandages very much more reliable and satisfactory than any of the expensive orthopedic appliances. When properly applied they hold the joint absolutely rigid, the dressing is light, com-

fortable and durable—the four principal requisites. It is often surprising how rapidly pain subsides when complete rest of the affected joint is secured, and this procedure alone will often cure a tubercular joint without any of the other accessories.

There is, however, one subject of fully as great importance as immobilization, and that is the prevention of secondary infection. A non-secondarily infected joint will sometimes get well without any treatment, but if it is secondarily infected it usually taxes our skill to the utmost. Secondary infection causes the ankylosis of more joints, the loss of more extremities, the death of more patients than the disregard of all the other precautions combined, and if I were permitted to give only two precautions in the treatment of tubercular joints I would say immobilize them in proper position and prevent secondary infection, and I am sure that if these two rules only were observed 95 per cent of all cases of joint tuberculosis would heal and a cure would result so far as the tuberculosis is concerned.

To emphasize this a little more strongly, let me say that up to two years ago I never saw a case of secondarily infected tuberculosis of the spine which healed permanently, and Hoffa, in his *Orthopedic Surgery* and in his lectures, states that 95 per cent of all cases of secondarily infected Pott's Disease never fully recover, but ultimately succumb to some form of tuberculosis. When we place opposite to this the fact that fully 98 per cent of tuberculosis of the spine can be permanently cured if secondary infection is prevented we will get some idea of the danger in incising tubercular abscesses. The old saying, "Where there is pus, there evacuate," has led to much mischief, because it has been applied to tubercular abscesses. Cold abscesses do not contain pus in the ordinary sense of the word, and if evacuated at all, every precaution should be taken to avoid secondary infection. Simple uncomplicated tuberculosis is one of the easiest

affections to relieve; in fact, you might almost say ordinarily it is a self-limited disease, while when complicated with secondary infection it is a serious malady and often taxes our ingenuity to the utmost. It is therefore our first duty when we are called to see a case of joint tuberculosis to consider this grave danger and to make our plans so that this can be avoided. If in spite of every precaution this complication does occur it then becomes our duty to combat it with all possible vigor, but this does not mean to cut down upon it and try to dissect out the sinus or to irrigate it with all imaginable antiseptics.

It is only within the last two years that we have had any reliable means at our command. I refer to the vaccination treatment introduced by Wright, of London, and to the injection of the tubercular sinuses by the bismuth paste recently introduced by Beck, of Chicago. As these are the two newest aids in the treatment of the more serious and complicated joint lesions I will refer to them somewhat in detail.

The Wright vaccination treatment consists in the subcutaneous injection of varying doses of Koch's new tuberculine at varying intervals, depending upon the opsonic index of the patient, and it is this careful study of the opsonic index that has made the difference in its efficiency.

Many years ago Haeckel made the observation that leukocytes and other living cells possess the power to ingest solids. Metchnikoff was the first, or one of the first, to make the observation that these cells will also take up pathogenic bacteria. He called this process phagocytosis, and contended that the leukocyte had the power of digesting the pathogenic bacteria and thus rendering them harmless to the human organism. Some observers have strongly opposed this view, contending that the finding of the microorganism within the leukocyte was purely accidental, or even going so far as to claim that the microorganism was the aggressor and en-

tered the leukocyte for the purpose of feeding upon it and destroying it.

Not much real progress was made until a few years ago, when Wright, of London, took up the subject, corroborated the observations of Metchnikoff and his followers, made several important new discoveries, and, putting all this knowledge together, made practical application of it, thus taking a tremendous stride forward in the scientific treatment of at least several common diseases.

It has long been believed that the number of bacteria each leukocyte could take up depended upon the condition of the leukocyte and upon the virulence of the bacteria in question. Wright has demonstrated that the condition of the leukocytes has little or nothing to do with their power of destroying bacteria, but that the condition of the blood serum determines the bactericidal power of the blood. He reached this conclusion after repeating the following experiment over and over again and practically always obtained the same results. Let *n* represent the normal individual and *p* the diseased or pathologic one. Take one volume of normal washed leukocytes, one volume of normal blood serum and one volume of tubercle bacilli emulsion, shake them up in a capillary pipette, seal the ends, put it in a water bath at a temperature of 37° C. for fifteen minutes, then make smears on glass slides, dry at ordinary room temperature, stain and fix with Wright's polychrom, count the bacteria in fifty typical polymorphonuclear neutrophils and you will find that each leukocyte contains on the average, say for instance, ten tubercle bacilli. The number taken up will depend somewhat upon the concentration of the tubercle bacilli emulsion. If now one volume of a patient's washed leukocytes and one volume of normal blood serum and one volume of the same tubercle emulsion is taken and treated in the same manner each leukocyte will on the average con-

tain approximately ten tubercle bacilli. If now the patient's washed leukocytes are taken and the patient's blood serum and the same tubercle bacilli emulsion and treated in the same manner, the number of bacilli that each individual leukocyte will have taken up will depend entirely upon the immunity that that patient has developed for tuberculosis. In the early stages of tuberculosis, especially if the disease is getting the upper hand, the average number of tubercle bacilli that each leukocyte will contain may be as low as two, more commonly it will be about five. Wright has introduced a new term to express this condition and would say that such a patient has an opsonic index of 5/10 or .5.

n.w.l.....n.b.s.....t.b.c.....	10
p.w.l.....n.b.s.....t.b.c.....	10
p.w.l.....p.b.s.....t.b.c.....	5

The above experiment, repeated by Wright and controlled by the other observers thousands of times, now proves beyond a reasonable doubt that the blood serum is the important factor in the production of immunity or resisting power of the patient, in that it so affects the pathogenic bacteria, or the leukocytes, or both, that the leukocytes will ingest and destroy a greater number of bacteria.

Wright now made the discovery that he could by a certain method raise this opsonic index, increase the phagocytic action of the leukocytes, thus improve the resisting power of the patient and effectually overcome the disease. This was the final step necessary in order to make all of this knowledge of practical value, and he accomplished his desired end by injecting minute quantities of a vaccine prepared from pathogenic microorganisms causing the various diseases.

Koch long ago recommended his new tuberculine to be used by subcutaneous injection, but while it was followed by brilliant results in some cases, it was

quite as frequently followed by dire failure, and not until Wright came out with his work did we have any clue to the reason why one case should react favorably and one badly. It has been proven very conclusively by Wright and many other observers that tuberculin must be given very carefully, otherwise it may do as much harm in one case as it does good in another and the only way in which the dose and the frequency of administration can be adjusted to the individual case is by a careful study of the opsonic index. If an overdose is given or if the dose is repeated at too short intervals the resisting power of the patient is greatly depressed instead of being improved, and if these excessive or too frequent doses are repeated serious results are sure to follow.

Early in our vaccination work we had two cases which impressed this fact upon us very forcibly. One was a case of very severe acne of the face and shoulders in which we gave an overdose of the vaccine, and while the patient had considerably improved before this overdose was administered she immediately had an exacerbation of the condition and became fully as bad as she had been at any previous time, if not worse; and this occurred without any appreciable rise in temperature or acceleration of the pulse, and if her affection had been a deep-seated one like a tuberculosis of a joint, we would not have known that we had given her an overdose except by a study of the opsonic index, and serious harm might have resulted from the vaccination. For the present, at least, until some other and simpler guide to the dosage can be determined, a careful reading of the opsonic index at short intervals is extremely important, as it is essential that we do not give a sufficiently large dose to unduly depress the index or to give a new dose while the index is on its downward course.

That there are many and various fea-

tures which may depress the opsonic index has now been repeatedly proven. Among these may be mentioned poor food, poor ventilation, chilling, constipation, and the shock incident to an anesthetic and an operation, and it is after any and all of these or even without them that it is necessary to read the opsonic index before a tuberculin injection is given, so as to avoid giving the injection when the index is on its downward course.

The importance of the last fact was impressed upon me by one of our first cases. A young woman with a very extensive tuberculosis of the neck was operated upon and the injections begun a week after the operation. The wound did badly, broke down in its whole extent and we did not know why this occurred until we found out that an extensive operation depresses the opsonic index for several weeks and it is not safe to start the tuberculin injections until the index has started on its upward course.

If secondary infection occurs in joint tuberculosis, either in spite of every precaution, or because the patient does not seek medical aid in time, or, what is still worse, because of a blunder of one of our colleagues, the prognosis is not nearly as bad now as it was up to a few years ago. If in one of these cases one will observe all of the precautions already recommended and bring to his aid the vaccination treatment, a very large per cent of these patients can still be relieved of their trouble.

In addition, tubercular sinuses can be made to heal much more rapidly than has been possible heretofore by making use of a method which Dr. Emil Beck of Chicago introduced several months ago. It consists of injecting the sinuses every two to four days with a sterile bismuth paste, consisting of thirty parts of bismuth and sixty parts of vaseline. This paste is injected at about 110° F. three

or four times with an interval of two or four days between the injections, and if at the end of this time the sinue has not stopped discharging, it is then injected with a paste consisting of thirty parts of bismuth subnitrate, sixty parts of vaseline, five parts of white wax, five parts of soft paraffine, and one part of 40% formaline. I have tried the method on eleven patients, one healed with one injection and two with five. The other eight are still under treatment, but have all of them shown great improvement.

In the treatment of joint tuberculosis in the past we have been very well satisfied if we have succeeded in curing the disease with the limb in good position, but with the affected joint permanently ankylosed. Since the introduction of these newer therapeutic agents we have accomplished much more. We have not only been able to effectively stamp out the tubercular process, but we are getting a larger and larger per cent of anatomical and functional cures. If all of the patients with joint tuberculosis are put under good hygienic and dietetic regime, if the joint is absolutely immobilized for a sufficiently long period of time and if the patient is properly treated with the new tuberculine controlled by carefully reading the opsonic index and if secondary infection is avoided, a very large per cent of the joints will heal perfectly and permanently and regain a very fair degree of mobility.

It has long been supposed and taught that long continued immobilization favors ankylosis if this immobilization is applied to inflamed joints. This belief is absolutely contrary to fact. I have never seen an anyklosed joint where the ankylosis could be fairly ascribed to too long immobilization, while I have seen a goodly number of ankylosed joints where I was convinced that inefficient and insufficiently prolonged immobilization was the direct cause of the ankylosis.

Let us now consider the method of

immobilization best suited for tuberculosis of the individual joint. For convenience, let us begin with the ankle joint. As stated before in the consideration of the joints in general, apart from the general considerations above outlined, there are two things upon which our attention must be especially centered; first, to immobilize the joint absolutely by some dressing that is light, durable and comfortable; second, to put the joint in that position in which the antagonistic muscles are at perfect equilibrium. In order to accomplish the first requirement, I have found plaster of Paris applied over stockinette and then reinforced by wheat gluten bandages to fulfill every requirement. A cast thus applied will hold the joint absolutely rigid and immovable for any desired length of time. It is comfortable and need not weigh to exceed 24 ounces. It is inexpensive and fulfils its requirements very much better than any of the expensive orthopedic appliances which I have ever seen. The ankle joint should be put in plaster with the foot at a little less than a right angle to the leg, because it is in this position that the muscle equilibrium is attained. The ventral flexors consisting of the soleus and gastrocnemius are very much stronger than the dorsal flexors, and unless the latter are put at a slight advantage the muscle equilibrium will not be attained, and it is upon the exact finding of this muscle equilibrium and upon the thoroughness of our immobilization that our ability to stop the pain depends. If the ankle is absolutely immobilized and the equilibrium is accurately established, muscle twitching will soon stop and with it all pain will cease. As soon as the pain ceases the patient will sleep well, eat well, gain in flesh, his opsonic index will rise and he is on a fair road to recovery. If the ankle is very painful, the patient may be kept quietly in bed for a few days, then allowed to walk with crutches,

and as soon as he can step on his foot without pain, the crutches may be discarded, a soft leather shoe placed over the cast and the patient may be allowed to resume his ordinary vocation.

If the knee joint is involved, the correct position of immobilization is an angle of about 175° . The cast should extend from the tuber ischium to the malleoli and should not weigh more than two pounds. While the knee is sensitive, the patient is allowed to walk with crutches with a high-soled shoe on the good foot, swinging the affected limb. As soon as the patient can bear his weight on the affected limb without experiencing any pain whatever he may discard the crutches and high sole and go about his business in the ordinary manner, possibly with the aid of a cane.

In the hip the position of equilibrium is 10° of abduction and 5° of ventral flexion. The cast should extend from the level of the umbilicus to a little above the knee. As a rule, it is unnecessary and often undesirable to apply extension. Sometimes if the affection is on the upper surface of the head of the femur or in the upper rim of the acetabulum, Buck's extension overnight is desirable. In the great majority of cases the extension furnished by the weight of the affected limb as the patient walks with crutches and a high sole under the good foot is all that is required. Ordinarily again, as soon as the patient can bear his weight on the affected limb without pain the crutches and high sole may be discarded.

In tuberculosis of the fingers, hand, and wrist, the cast should extend from the very tip of the fingers to within two inches of the elbow, the fingers, hand and wrist should be perfectly straight.

In the elbow the cast should extend from the wrist to the axilla and the arm and forearm should be at a right angle. In the shoulder the arm should be strapped to the chest with adhesive straps

with a small triangular pad placed in the axilla, a plaster of paris shoulder cap is now applied and held in place by a soft roller bandage and the forearm placed in a sling.

The question of how to immobilize these tubercular joints now being solved, the next important point to determine is the time. This I would answer by saying, be sure to immobilize long enough. No definite rule can be laid down, but as all of these patients can go about their business almost from the first and are not greatly inconvenienced by the dressings, wearing the cast a little longer than is absolutely necessary is no great hardship and will absolutely protect them against a relapse. In the case of a hip joint, for instance, I have made it a rule to leave the cast in place six months after I am thoroughly convinced that the tuberculosis is entirely healed.

In the case of a very painful tubercular joint with partial ankylosis in a faulty position the question arises, what shall be done here? Let us take for instance a subacute tuberculosis of the hip joint, the patient greatly emaciated, suffering excruciating pain, the thigh flexed upon the abdomen, adducted and rotated inwardly. Shall we depend upon Buck's extension and attempt thus to slowly bring the joint into proper position? Personally I would say "No" most emphatically. Anesthetize the patient, place the thigh in proper position, apply a cast, give an occasional dose of morphine hypodermically for the first two or three days, at the end of which time the spasm will have subsided entirely. As soon as the opsonic index starts on its upward course, put him on vaccination treatment, place a high-soled shoe on his good foot, get him on crutches and out of doors into the fresh air in the course of ten days, give him good food, and the rapidity with which he takes on flesh, gets rosy cheeks instead of the hectic flush, will surprise any one who has not

employed this treatment before.

Joint tuberculosis, if thus approached, loses much of its danger to the patient

and disappointment to the surgeon and becomes one of the most satisfactory and easily managed of affections.

A CASE OF OBSTETRICS, WITH SEQUELAE*

Pyemia; Pregnancy; Eclampsia; Manual Dilation of the Cervix with Forceps Delivery; Vesico-Cervical Fistula; Operation for Its Relief with Amputation of the Anterior Uterine Lip; Atresia of Cervix Canal; Hematometra; Repeated Operation; Recovery.

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Detroit.

The following case is so unusual and presents so many points of interest that it seems worthy of consideration. The patient came under my care early in the present year; for notes of the case previous to that time I am indebted to Dr. Francis Duffield, who attended her in confinement:

Mrs. T., aged 35; Ipara. Family history negative. Had always been well until four years ago when she was attacked by severe pain in the kidney region of the right side. This was said by the physician who saw her to be due to "pyelitis."

The present history begins on January 16th, 1907, when the patient had her last menstrual period. It was estimated from this that the probable date of confinement would be October 23rd of the same year. In February she suffered from a severe eczema of the arms, legs and abdomen. A biweekly examination of the urine was negative save for the constant presence of pus. She continued otherwise well and on August 23rd the urine is reported as normal. On August 26th, three days later, she had a severe pain at the pit of the stomach and a near-by physician was summoned to relieve the distress. All of the following day there was a severe headache and that night the same physician was called and again prescribed. On the afternoon

of August 28th the patient was seized with a convulsion and between that time and eight o'clock in the evening, when Dr. Duffield saw her, two more had occurred. The urine was found to be loaded with albumen. An ambulance was called and she was conveyed as soon as possible to the Woman's Hospital. On her arrival there another convulsion took place, making four seizures in all. She was at once placed on the operating table and, under anesthesia, manual dilatation of the cervix was accomplished with difficulty. A presenting shoulder was displaced, forceps applied to the head and a living child delivered. The latter died four hours later.

During the rapid delivery a considerable tear of the cervix uteri occurred and the perineum was also lacerated. On account of the patient's condition the latter only was hastily repaired. There were no further convulsions nor was an unusual amount of blood lost during the delivery. On the third day following labor a dribbling of urine began from the vagina and continued during the remainder of a rather slow convalescence. The patient was also able to empty the bladder voluntarily. The urine gradually cleared up and became normal.

On account of the continuous flow of urine over the vaginal surfaces the patient's condition became very uncomfortable and distressing, and in October an operation was undertaken for the repair of the fistula. At this time the following conditions were found; the anterior lip of the cervix had sloughed and there was a

*Read at the 43rd meeting of the Michigan State Medical Society in Manistee, June 24 and 25, 1908.

constant stream of urine over the posterior lip from an opening between the bladder and the cervical canal at about the level of the internal os.

This fistula was closed by sutures, the posterior cervical lip amputated and an attempt made to bring the anterior wall of the uterus in apposition with the anterior wall of the vagina.

Following operation there was no abnormal escape of urine for twelve days; then seeping began and finally a considerable discharge took place from the original vesico-cervical lesion. The amount, however, was less than before and the general condition of the patient was decidedly improved. Six weeks later there was an attack of menstrual pain but no flow of blood, and this was again repeated after another interval of four weeks.

On January 14th Mrs. T. was once more sent to the Woman's Hospital and placed under my care.

Operation January 15th, 1908. The uterus was enlarged to about the size of a three months' pregnancy; the sound could not be passed. Following the former operation an agglutination of the involved surfaces had taken place with complete atresia of the cervical canal. The menstrual molimina of the two preceding months were thus explained; a hematometra had formed because of the occlusion of the canal.

As soon as the thin partition between bladder and cervix was separated about four ounces of thick, prune-juice blood of characteristic odor, escaped and the uterus contracted down to nearly its normal proportions. The cavity was washed out with an antiseptic solution. An attempt was then instituted to form a new cervix by dissecting up the tissues around the supravaginal portion. This succeeded in creating a fairly respectable vaginal teat. Attention was then turned to the fistula, which had now become an opening the size of a silver ten cent piece. The tissues around the defect were split and the various layers closed separately. To insure a continuous and complete drainage of the bladder a self-retaining catheter was placed and allowed to remain for two weeks. From the second operation the patient made a complete recovery, the tissues united perfectly and she left the hospital in good condition on the twenty-first day.

March 28th, 1908, the following note was made: Patient menstruated normally on February 8th and again on March 18th, the flow at each period continuing for four days. There was no

pain and she never had less discomfort. The discharge for the first two days was rather more profuse than usual but at no time was it excessive. *There has not been a particle of leakage from the closed fistula.* A slight vesical irritation still remains, probably due to the long continued use of the catheter. This is especially noticeable if patient is on her feet a good deal or becomes over-fatigued. At such times she is unable to completely control the action of the bladder and, unless the latter is emptied at once, a few drops of urine will leak through the urethra and wet the clothing. She is otherwise in excellent health.

Examination shows a small, short cervix which presents the appearance of a threequarters ring projecting into the vaginal vault. The defective portion is turned toward the scar of the former fistula which is firmly healed and seems strong. Since this time the patient has continued well. No further examination has been made.

The case just reported is both interesting and instructive in that it presents a chain of conditions rarely met with in the same patient, which follow one another in regular sequence.

If pyelitis really existed four years before the pregnancy, it had apparently been relieved by the medication employed at that time, and was lighted up to a slight extent by the advent of gestation.

When the pus disappeared from the urine, noted August 23rd, the patient almost immediately began to develop signs of toxemia, as displayed in the epigastric pain, the severe headache and finally by the convulsions. The failure of the physician first called to recognize nature's warning was reprehensible. Symptoms such as those displayed demand in the pregnant woman the promptest and most painstaking investigation, and had they been properly met the further complications which developed would undoubtedly have been obviated. Unfortunately, pregnancy is not looked upon with that expectant solicitude which its importance demands, and because the majority of cases do

well, requiring, but not always obtaining, only supervision and guidance rather than actual treatment, we too often ignore the fact, that while a physiologic process, gravidity balances on a point between health and disease, often only the slightest moment being needed to precipitate normal well-being into pathologic tragedy. We all of us are watchful and alert to grapple with the morbid, but we are too prone to forget that it is more largely within our province to avert instead of to overcome.

The os in this case being partially open, rapid dilatation of the cervix and emptying the uterus for the relief of the eclampsia was the proper method to pursue. Had the cervix been long and firm and the os rigid, the vaginal Cesarean Section might have offered better results with less danger of damage to the maternal soft parts. This operation, however, is best suited to the hand of the experienced surgeon and should not be undertaken by one unfamiliar with vaginal operative method and technique.

The neurotic wart is peculiar in that it occurs in two forms. It may manifest itself in a disseminate form on the face, arms, forearms or hands; or, it may appear as one large wart with smaller satellite ones radiating from it along the course of cutaneous nerves. A descending, labile, galvanic current will cause their disappearance.

Lichen ruber neuroticum is characterized by a linear distribution of the lesions along the course of cutaneous nerves. The itching is marked and there exists a tendency for the disease to become disseminate. An external application of resorcin in alcohol and arsenous acid internally causes the lesions to disappear.

In order to obtain anything like good results in the treatment of psoriasis it is absolutely necessary to have a clear field upon which to work. The affected skin should be cleared of all scales and other accumulations due to the process characteristic of the disease. One of the best agents to accomplish this is the well-known keratolytic remedy—the *sapo viridis* which acts not only as a remover of the scales, but is an excellent detergent as well.

Atresia of the cervix with resulting hematometra is not a frequent sequela of operations upon these parts, but is more commonly seen after difficult labor, and especially in the lower birth-canal. Since a better knowledge of the obstetric forceps has obtained, and a greater skill and intelligence in their application has been exercised, vesical fistulæ are more rarely met with. Twenty-five or thirty years ago it was not uncommon to see these cases, the result of prolonged pressure of the child's head and subsequent sloughing of the necrosed parts. Nowadays, however, this defect is almost entirely a post-operative complication of vaginal hysterectomy, especially when clamp forceps have been employed. I have seen but one instance of this kind in which the ligature was used to tie off the broad ligaments. Here it is probable that the cancerous growth had so devitalized the parts that sloughing occurred or possibly a ligature may have been drawn too tightly and have strangled the inclosed tissues.

It is not as generally known as it should be that the manner of getting rid of animal parasites of the skin is to dissolve the eggs or nits and kill the adult animals. For the former the application of green soap (*sapo viridis*) is sufficient. For the latter a liberal application of tincture of stavesacre (*staphisagria*) is quite successful. The treatment is cleanly, successful and not irritating.

It is a good plan in all acute inflammatory diseases of the integument to have the intestinal functions of the patient, insofar as evacuation is concerned, regular, as this is conducive to relieving any congestive or plethoric condition of the splanchnic system and exercises, in addition, a good effect in procuring a more rapid recovery from the superficial cutaneous process.

A chancre should never be cauterized. The use of mercurial applications is less painful, more efficient and decidedly more rational. In fact, simple protection is sufficient as the chancre is a self-limited lesion which only needs to be kept clean.

THE TREATMENT OF CHRONIC DISEASES OF THE HEART BY CARBONATED MINERAL BATHS AND AUXILIARY EXERCISES*

W. L. WILSON, M. D.,
St. Joseph.

The application of carbonic acid gas for therapeutic purposes can be traced to the earliest times, but exact observations of its nature and effects were not made until the seventeenth century. Mineral springs containing large amounts of this gas had served for therapeutic purposes long before the gas itself had been demonstrated, and, on account of the impressive manner in which they issue from the ground, supernatural properties were attributed to them, strange stories were propounded regarding their origin, and wonderful tales and fables were current of their curative powers.

The physicians of Nauheim, however, were the first to give a scientific description of the effect of carbonic acid water baths in different diseased conditions, especially in disorders of the circulation. Beneke in 1859 demonstrated that the mineral water bath, saturated with carbonic acid gas, is a powerful and effective stimulant for the enfeebled heart; and the brothers Schott, Groedel, and others, have since continued to work on this basis, with the result of making Bad Nauheim a world renowned resort for the treatment of cardiac disorders. Here, during the season from May to October, may be seen representatives from every country of Europe and America, attracted to the place by the fame of its wonderful thermal gas springs.

In Franzensbad, carbonic acid baths are given in the dry form, and one of the springs there, the Polterbrunnen, has been renowned for centuries, but dis-

eases of the heart do not appear to be benefited by the gas applied in this way.

At Nauheim the bath water is supplied by three sprudel springs, so highly charged with carbonic acid that they are driven to a height of fifty feet above the ground, foaming like champagne, and yielding a crystal-clear water, of a temperature of 86° F. to 94° F.

Analysis of the water shows the presence of a large number of salts, but the principal ingredients are chloride of sodium, chloride of calcium, and carbonic acid; the others being present in such small amounts that they may be disregarded.

With this water five different types of bath are given: 1. The simple brine bath, or "sool bad," in which all of the carbonic acid has been evaporated by graduation. 2. The thermal bath, in which a large part of the carbonic acid has been allowed to escape by the water being exposed to the air in large reservoirs. 3. The thermal-sprudel, in which a smaller amount is allowed to escape by storing the water in closed reservoirs. 4. The sprudel, in which the water is led into the bath directly from the springs. 5. The "strom-bad," in which by a special contrivance the sprudel water is made to flow continuously in and out of the tub.

Treatment is begun by giving the sool-bad, and, as the patient gains in strength, following with the thermal, thermal-sprudel, and sprudel in the order named. The strom-bad is seldom given to heart patients as it is too stimulating. The temperature is usually 95° F. for

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the first bath, and is gradually decreased in the subsequent baths 'till 85° F. is reached. The duration varies from five minutes for the first bath, to twenty minutes for the last, and the whole treatment extends over a period of four to six weeks, during which time the patient's mode of life in regard to rest, exercise, diet, etc., is carefully regulated.

The Nauheim baths are given artificially in a number of resorts, and in private practice, in a variety of ways. In whatever manner prepared, the essential ingredients are the chlorides of sodium and calcium, bicarbonate of soda, and hydrochloric acid, or in the place of the latter, cakes of the acid sulphate of lime.

The principle underlying the preparation of these is to start with water at a temperature of 95° F. and containing 1% chloride of sodium and 1/10% chloride of calcium, but no carbonic acid, the latter being added during the second week. The percentage of the ingredients is to be increased, the temperature lowered, and the duration lengthened, until finally the chloride of sodium reaches 3%, chloride of calcium 1%, the temperature 85° F., and the time twenty minutes.

These artificial baths, although they furnish a fairly good substitute for the Nauheim baths, are not entirely satisfactory. The gas is evolved too rapidly and subsides too quickly.

In many resorts, carbonic acid baths are given by charging the water with the gas conducted from a drum into the bottom of the tub. The objection to this method is, that the gas is not mixed intimately enough with the water.

During a visit to Nauheim last year, I was impressed with the fact that by diluting the St. Joseph mineral water, according to certain fixed formulæ, and charging it artificially with carbonic acid, I could give baths approximating closely the Nauheim, and equally efficacious, possibly more so, as the St. Joseph

water contains sulphuretted hydrogen gas, which is not present in the Nauheim. The presence of this gas, in my opinion, enhances the effect of the carbonic acid.

The main ingredients of the St. Joseph water are likewise the chlorides of sodium and calcium, but as they are present in much larger quantity than in the Nauheim, it is necessary to dilute it three times with plain water in order to approximate the strength of the sprudel bath. For the thermal-sprudel, thermal and sool-bad, still further dilutions are required, thus: During the first week, the mineral water is diluted with nine parts of plain water, and no carbonic acid added. In the second week, a dilution of seven parts is used, and a small amount of carbonic acid added. In the third week, a dilution of five parts, and a larger amount of the gas. In the fourth week, a dilution of three parts, and a still larger amount of gas.

The gas is first thoroughly mixed by agitation with plain water in a carbonator, which is provided with a guage to indicate the pressure, so that the amount used can be regulated as desired. This charged water is then conducted by block tin pipes to a U-shaped perforated tube, placed in the bottom of the tub, by means of which the water in the bath is thoroughly and continuously charged with the gas.

A bath is given daily for three successive days, with a rest on the fourth day. In some cases, however, a bath every other day is preferable. The duration of the first bath is five minutes and the temperature 95° F. Subsequently, the duration is gradually lengthened, and the temperature lowered, until, at the expiration of the course, a bath of twenty minutes' duration, at a temperature of 85° F., is given. Some cases, however, do not stand the lower temperatures well; in which case it is advisable not to reduce below 90 or 92° F.

After each bath the patient is dried with a warm towel and directed to rest for one and a half hours. If he complains of faintness, a little warm liquid nourishment furnishes the needed support.

Physiological Action.

When patients with weak hearts are placed in a carbonated bath, at a temperature of 92° F. to 95° F., they first experience a slight feeling of oppression in the chest, which soon passes off, however, and is succeeded by a feeling of warmth and well-being. In most cases the patient's pulse becomes slower and fuller, and the respirations likewise fuller and less in number. It is not unusual to have a lowering of from four to twelve beats in the bath, and later on, during the period of rest, a further diminution, with a corresponding increase of fullness. A more powerful action of the heart is induced, the pulse is more vigorous, and there is a greater fullness of the arterial system in general and presumably of the coronary arteries. These effects are produced by the stimulating action of the chlorides and carbon dioxide upon the sensory nerve endings in the skin, whereby the cardiac nerves are affected reflexly, and cause the heart to beat more forcibly and less rapidly.

The peripheral vessels become dilated and better filled and this relieves internal engorgement and lessens the work of the left ventricle. These physiological effects are dependent upon (1) the responsive capacity of the nervous system to peripheral stimulation, (2) the integrity of the vessel walls as regards their resilience, and (3) the integrity of the myocardium as a contractile mechanism, and their influence on blood pressure will depend upon whether arterio-dilatation or the increase of cardiac energy is in excess.

In the first case the blood pressure will fail; in the latter it will rise; if they

are exactly balanced it will remain unchanged. Ordinarily a plain brine bath increases the blood pressure from 5 to 10 mm. and the saline carbonated from 10 to 20 mm. If in a given case the blood pressure is diminished after a bath it indicates myocardial degeneration or advanced arteriosclerosis. Schott claims that if the blood pressure is as low as 60 mm. Neuheim baths are contra-indicated.

In addition to the chemical effect of the salts and carbonic acid on the nerve endings, the latter exerts an effect of a thermic nature causing a redness and tingling of the skin so that baths of a lower temperature may be given without chilling. This is due to the fact that the point of indifference of carbonic acid is much lower than that of water so that while the bath water causes a stimulation of cold, the gas bubbles being heated above their indifferent point cause a stimulation of warmth, and some writers ascribe a part of their good effect to this marked thermic contrast.

Another important effect that these baths produce is the change in the quality of the blood, the hemoglobin frequently increasing from 5 to 20% and the red corpuscles from 3 to 10%.

With better blood state of course improved nerve tone must follow but aside from this, the baths exert a tonic effect on the central nervous system, by reflex stimulation, and induce a feeling of well-being, as well as an increase in all the nutritive processes.

Exercise Treatment.

In addition to the baths, a system of graded exercise treatment is employed. I begin with a stroking massage, the effect of which is to produce a fullness and slowing of the pulse, in consequence of the greater ease with which the flow of blood takes place through the venous capillaries. This massage should be made from below upward toward the

center of the body, and from the head downward. Great care must be used in applying abdominal massage, else in some cases cardiac depression is produced.

This massage should be given daily for from 6 to 10 minutes at the outset to 20 minutes or half an hour. It is best given several hours before or after the bath, and should be followed by an hour's rest.

Respiratory exercises are of great importance, as they cause a better aeration of the blood, and this has a stimulating effect on the cardiac nerves and the heart muscle. They also cause an improved aspiration by which the venous return is facilitated.

After a week or ten days of massage and respiratory exercises, resistance exercises are given. These consist of voluntary movements by the patient of flexion, extension, adduction, abduction, and rotation of the extremities and trunk, which are carefully resisted by an attendant trained to the work. The attendant is instructed to observe carefully the rate of breathing and the pulse and to stop the movements at the onset of rapid respiration, palpitation or perspiration. Then after a short rest they may be resumed. Resistance should be made in such a way as not to constrict any part of the body, and should be adjusted to the patient's strength. As the course proceeds the energy of the movements and the force of the resistance may be gradually increased. The patient should be taught not to hold the breath, but to breathe regularly while the exercises are being given. The same movement is not to be made twice in succession, and each one is followed by a pause. All movements should be made slowly and steadily and each exercise should bring into play new groups of muscles. No movement should be used which carries the hands above the level of the shoulders and particularly

not above the head in cases where the right ventricle is much distended. In heavily built and stout persons certain of these movements may produce intermittent heart action, in which case they should be omitted. Frequently eight or ten minutes of stroking massage given after twelve or fifteen minutes of resistance exercises has a soothing and yet stimulating effect on the patient.

The succession and combination of massage, respiratory exercises, and resistance exercises, and the length of time which each form is to receive, must be determined by taking into consideration all the elements of the case. Ordinarily from ten to thirty minutes is the time allowed, and they should not be given in the same forenoon as the bath.

Resistance movements, by contracting the muscles, drive on the venous blood, cause a greater afflux of arterial blood to the part, and promote deeper and better respiration. The direct influence of these factors is to enable the heart to act more forcibly, yet more quietly, to contract down, and tend to overcome cardiac dilatation.

When the heart has regained a sufficient degree of strength the patient may begin to take active exercise tentatively; first, a short walk on the level, the length of which may be increased from day to day; always being careful to avoid fatigue.

Later on he may walk up a gentle incline, at such a pace as not to cause a labored or rapid action of the heart, and gradually inclines of a greater length and steepness are surmounted. Stair climbing is also a useful mode of exercising. The patient is taught to mount at first not more than two, three or four steps, resting long enough on each step to take a few deep breaths.

In many cases, however, exercise on the level is all that should be attempted.

Dietary Rules.

In regard to diet, it is impossible to

give rules to suit each individual case. The age, habits of life, and constitution of the patient, must be considered. Excessive and ill-applied severity may undermine the patient's strength. Nevertheless the diet is a matter requiring careful attention.

Owing to passive congestion of the abdominal organs, leading to chronic catarrh of the stomach and intestines, and alteration in the biliary and pancreatic secretions, cardiac patients are usually disturbed by fermentative dyspepsia, even after the taking of the simplest and most easily digested food. Hence farinaceous foods, sugars, and fats, must be restricted, and given in the least objectionable forms. Most desserts and sweets should be prohibited. Fruits may be allowed if ripe and fresh. Most of the green vegetables are well borne; and in the majority of cases a generous mixed meat and vegetable diet is essential. Meats should never be fried, and should be served without sauces. Fresh fish and eggs are allowed. Alcohol should be prohibited, except in the case of older patients, who have been used to wine or other stimulant all their lives, when a tablespoonful of whisky, or a glass of wine may be allowed. A small cup of coffee, tea or cocoa, when not made too strong, and well diluted with milk, is not objected to. Milk is especially recommended in cases of arteriosclerosis, and in cases in which renal complications exist.

The amount of fluid ingested should be restricted, especially at meals, when not more than four to six ounces should be taken. On this account soups are usually left out of the diet. The total amount of fluid in twenty-four hours should not exceed three pints, and in cases of dropsy, half this amount.

As digestion and assimilation are both slow, food should not be taken at short intervals. Usually five hours should elapse for the complete digestion of one

meal before another is taken. In cases where palpitation and dyspnea develop, it is better, however, to eat small quantities, and take four or five meals a day; provided food be given which is digested easily and quickly. The feeling of faintness and gnawing at the epigastrium which is often troublesome between meals, may be relieved by a small cup full of bouillon, or weak tea. In cases of fatty heart a diet suited to obesity is called for, but that is too broad a subject for the limits of this paper.

Indications for Treatment.

These baths are indicated in all forms of functional cardiac disorder, myocarditis, fatty heart, angina pectoris, and in all forms of loss of compensation due to valvular disease, or dependent on muscular changes. They are especially valuable in weakness of the heart muscle due to bodily or nervous overstrain, toxic poisoning from alcohol or tobacco, or following influenza, diphtheria, or other infectious diseases.

They are contra-indicated in aneurism, advanced cases of arterio-sclerosis, and according to Groedel and Babcock, they should not be used in cases in which the compensation is entirely lost, but Schott and Bezley Thorne assert the contrary. I am inclined to agree with the former to the extent that rest in bed and measures to relieve the dropsical condition should be employed before resorting to the baths and exercises.

Prognosis.

Provided, the treatment has been carefully directed and faithfully carried out, we may expect to find improved contraction of the heart muscle, and in cases of dilatation a diminution in the size of the heart. Frequently the area of cardiac dullness is diminished by from three-quarters of an inch to an inch and a quarter or often more,

There is also a notable diminution in the dimensions of the liver, and the kidneys are relieved of congestion as shown by increased diuresis. The lips and skin assume a healthier color, the breathing is slower and deeper, and the patient gains in bodily strength and vigor, becomes more cheerful in mind, and is able to exercise without discomfort. These good effects are continued after the course of baths, provided the patient is impressed with the fact that moderation in all things is the only safe course for a cardiopath to pursue.

In the advanced cases, after a rest of a month, the patient should take a second course.

Conclusions.

No form of treatment which is applied to chronic disease, and often apparently hopeless cases, can show a larger number of improved patients, whose energy has been restored, and whose lives have been prolonged for a number of years.

In functional cases they are usually curative. In valvular disease, and in the case of the different degenerations of the heart muscle, a cure is not to be expected, but if the lives of these patients can be made more comfortable and their existence prolonged, much has been accomplished, and carbonated mineral baths deserve a prominent place among our therapeutic resources.

DIET AND DIGESTION*

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In this age of wonderful strides in mechanics, physics, electricity and all other sciences, dietetics is just beginning to keep pace with the rest. In improving every thing else, man has in a great measure lost sight of himself. One thing is absolutely certain, the technical knowledge we have is very often forgotten. Appetite, inflamed and irritated stomachs are given full sway. No dietary is consulted. The stomach is loaded with rich foods; very often the very hardest ones to digest; washed down with hot coffee, and iced water. A few hours later when the stomach is partly filled with undigested and fermented food, another meal is hastily swallowed. Nothing is so utterly astounding as the weakness and folly of the human race. Herbert Spencer says:

"The first requisite for success is to be a good animal." Holmes tells us in order to make one we will have to begin four or five generations back.

The ancient philosophers located the soul in the stomach; later it was located in the heart. After Harvey and others demonstrated this organ to be nothing but a pump, the soul was located in the cranium. I am inclined to think the ancient philosophers correct. We were diligently taught that our thoughts and morals were simply an index of what we ate. This of course must be modified by the condition it passes into the circulation; whether pure or mixed with toxins. It is truly said that dyspepsia and religion do not go well together; but good digestion and holiness are twins. A holy man is a healthy, whole man, with all the functions in good order.

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Dyspepsia is the remorse of a guilty stomach—a physiological sin. Good digestion is more to be desired than great riches.

How are we to avoid this American curse—dyspepsia, neurasthenia and premature old age? It is said that most people dig their own graves with their teeth. They eat too much, eat too rapidly, eat the wrong things, and at the wrong time. Unless a person have a pressing engagement with his own funeral, what sense is there in hurrying with his meals?

That a plain, simple, mixed diet in not too great a quantity is conducive to good health and longevity, the history of the human race proves. Over-indulgence in rich foods causes an abnormal desire. The quick lunch counter menu which busy men rush to, bolt down a hasty mess of gastric irritants, then return at once to business, overworks the stomach, and leads to gastric fatigue, which is serious in its ravages on general health. Man does not succumb so often from overwork of the brain, as from overwork of the stomach. The chef and housewife are ignorant of the laws of dietetics, especially that pertaining to the composition and preparation of food. The government agricultural department teaches farmers how to feed their hogs and cattle. Should we not prescribe rational diet for our patients?

Dietetics as a prophylactic against, and as a partial cure for disease has been sadly neglected in the curriculum of our medical colleges, and in our medical literature. Think of the whole subject of dietetics disposed of in two or three lectures in a great university. We were advised that "a proper and restricted diet be recommended." Very good; but we lacked the special training necessary to recommend it. We were taught that "one man's meat is another man's poison." In practice we were confronted with the proposition,

"What is meat, and what is poison to a given man?"

The labor of the true physician is not merely to relieve suffering, and cure disease. Prophylaxis and the general welfare of the race must be considered. Such a betterment and uplifting of the human race is to be called philanthropic. No movement has ever been inaugurated for the uplifting of man which has shown results commensurate with the effort expended. It is ignorance of the laws governing our physical existence—creation, birth and living, that makes reform movements necessary. We must deal with causes. The body to a great extent controls the mind, and therefore the conduct. We are animals without the governing instincts of brutes; and so limited in reason and knowledge, as to be practically unable to regulate conduct. A man born under proper conditions, and given correct knowledge of living, will need neither moral suasion nor prohibition to keep him from the liquor habit; nor so far as this world is concerned, will he need any reform movements, or dread of future punishment to make him a good citizen.

The use of tobacco, alcohol, opium, cocain, chloral and other stimulants is not due to the victim's taste so much as an overwhelming desire for peace of mind. We must teach people that their ills do not come from God or Adam, or Nature, but are mostly self-inflicted; or come from their ancestors. The scriptural text is that the iniquity of the parents shall be visited unto the third and fourth generation.

No language can sufficiently emphasize the fact, that there is nothing of so great value to us as knowing how to live. And to know what to eat comes first. Not all ailments come from improper food; some are hereditary, and some are thrust on us, as the infectious diseases. If we were to eat the right kind of food, in proper quantity, prop-

erly prepared and at proper intervals, sickness would scarcely be known. Improper food and eating cause indigestion, this in turn causes auto-intoxication; this retards moral and intellectual development; causes a craving for stimulants, drives people to crime, makes labor a burden, where it should be a pleasure; causes life to be partially or wholly a failure, makes individuals a burden to society, and is the cause of most of our insane and suicides.

Sir Henry Thompson says: "I have, for some years past, been compelled, by facts which are constantly coming before me, to accept the conclusion that more mischief, in the form of actual disease, of impaired vigor, and of shortened life, accrues to civilized man, so far as I have observed, in our own country and through western and central Europe, from erroneous habits in eating, than from the habitual use of alcoholic drinks, considerable as I know the evil of that to be."

Give us more good cooks and there will be fewer children with stomach aches, fewer people with torpid livers, less demand for bitters to tone up the stomach, fewer men seeking saloons to drown their dyspepsia; and doctors and funeral directors will grow poor.

Americans grow old early and die young, and one of the prime causes is that their home cooking is not fit for man or beast. Using statistics in the rough, we say one-half of the children born, die before the fifth year. We find among the chief diseases causing this frightful mortality are bowel troubles and convulsions from bad food. Abernathy said, "One-fourth of what we eat keeps us. The rest we keep at the risk of our lives."

Three-fourths of the so-called heart diseases are merely disturbances caused by decomposing food in the stomach and intestines. Heart failure and "acute indigestion" (the new cause of death), can

be traced to the same cause. Also a host of lesser diseases. The bodily metabolism, particularly as affected by diet, is a factor not to be lightly considered in the presence of any morbid state, while it is an influence of primary importance in the management of a group of diseases of which obesity, diabetes, gout, lithemia may be viewed as typical examples; and it is of scarcely less weight in connection with diseases connected with or followed by wasting.

Foods have certain chemical and physical properties that may often be utilized with therapeutic advantage. It is true that all individuals do not react alike to the same articles, as they do not to the same medicinal agents. Accordingly allowance must be made here likewise for personal idiosyncrasy.

Physicians ought to know the qualities and properties of ordinary foods, and the best methods of preparing them. It is well to know what is suitable under different conditions, and what foods have particular value as remedial agents.

We have three ways of computing proportions of proteids, fats and carbohydrates. One consists of using the tables of percentages by weight. Second, Kellogg's tables which give the number of calories in the form of proteids, fats and carbohydrates per ounce of each kind of food. Third, calories per cent of Fisher. He takes as his starting point, not a unit of weight, but a unit of food value, called a "standard portion" of each kind of food. A "standard portion" is the amount of food which contains 100 calories. From Fisher's tables we can prescribe exact portions of food principles, the same as food for infants, or exact doses of medicine.

There have been some recent advances in the problems of Bio-Chemistry. We will have to give up the idea that digestion is simply a chemical process that can be carried on in a test tube. All

writers have stuck very close to the knowledge given us by Dr. Beaumont in his experiments on Alexis St. Martin at Mackinac Island, from 1825 to 1836. In the light of our present knowledge we will have to depart from the ideas of our old physiologists and text books. Digestion in the human organism is carried on largely by the action of peculiar principles, ferments, secreted by the glands connected with the alimentary canal. These ferments are very powerful, in that they can effect profound changes in the food stuffs. Changes which the chemist can only imitate by processes which would destroy the human organism.

Organic ferments are very delicate bodies, which can only exercise their action under favorable conditions, and which are inhibited or destroyed by the slightest departure from these. Cannon has shown that there is far less general movement of the contents of the stomach, after a full meal. Volhard's discovery of a new gastric lipase, is another addition to our knowledge. Laquer found this substance active enough to convert a large part of the emulsified fat into fatty acids and glycerine. The discovery of this fat-digesting enzyme is of increased significance in the preparation of food for assimilation. The chief difference between our views of pancreatic digestion and that of a few years ago centre around the discovery of enterokinase, by Schepowalniko, and of secretin by Starling. A minute amount of enterokinase will render active a relatively large amount of trypsinogen, leading to the formation of trypsin, which is absent in pure pancreatic juice fresh from the duct of Wirsung. Secretin, discovered by Bayliss and Starling in the mucosa of the duodenum, seems to have the function of stimulating pancreatic secretion. The discovery of the enzyme eripisen, by Cohnheim, in 1901, has helped to account for some of the

anomalies of proteid digestion and absorption. Its combined action with that of trypsin reduces a soluble proteid to its cleavage products in a time more closely resembling the speed of digestion in the body than is possible with trypsinogen alone. The admission of a breaking down to the fundamental units of structure during the process of digestion makes it apparent how a dog can build up typical dog proteid, a fowl its characteristic tissue, a man, his, from the identical diet. We can understand, too, why dog or human serum remains uniform in composition, no matter what the diet. We have simply to assume the two propositions of complete cleavage and re-synthesis, to put the whole question of proteid absorption on a reasonable basis. The work of Abderhelden and his pupils, from another standpoint, presents absolute evidence of proteid synthesis. Recent work by Kauffmann and by Wilcox and Hopkins bears indirectly on another phase of this same question, viz.: that there is much evidence to show that proteids are made in the animal organism from the deep-seated cleavage products of proteid digestion. The intestines exercise an excretory function as well as an absorptive one, more particularly in the case of metallic salts.

Recent investigations of metabolism, its phenomena and variation, by numerous observers have laid a foundation for study that still means wonderful advancement in our knowledge of physiological and pathological processes. The researches of physiological chemists and bacteriologists are shedding wonderful light on the vital processes in health and disease. The increase of indican in the urine is certain evidence of constitutional toxemia, the result of intestinal auto-intoxication. Until the profession grasp the extreme gravity and recognize the frequency of this condition and learn how to correctly interpret its true im-

port, there can be but little progress in its successful management. As the magnitude of the problem is fully apprehended and intelligently and diligently investigated there will be unquestionably great advances made in the prevention of the more chronic and incurable pathological conditions. Both acute and chronic diseases will be less frequent. The health and happiness of the human race will be greatly augmented. Longevity will be further extended, and mortality progressively lowered.

The intestinal tract introduces into the body every substance except oxygen; and before these substances are introduced it elaborates them. A disturbance of its functions must exercise a most pernicious influence upon the cells of the entire body. It has been demonstrated that ptomaines and toxins produced in the alimentary canal through the fermentation of food will cause vertigo, disturbance of vision, depression, headache, hallucinations, insomnia, numbness of limbs, palpitation, intercostal neuralgia, acne, eczema, urticaria, albuminuria, peptonuria, loss of physical and moral energy, etc., etc.

Sclerosis of the liver, kidneys and other organs formerly blamed to alcohol are nothing but the result of toxemia. Otherwise how would children and temperate people be subject to these troubles like those who use spirits? The person who is intemperate in drink is most likely to be intemperate in eating and other things; and more likely to have a disordered intestinal tract.

Physicians are just beginning to realize the importance of auto-intoxication in disease. Opsonic treatment is an attempt to increase the power of resistance of the body to attacks of pathogenic organisms. Impaired digestion and assimilation, resulting in auto-infection, is the most common cause of the bacterial invasion. The cells are handicapped; they struggle to renew themselves, but

from the persistent mal-nutrition are compelled to surrender. We hope to cure by antitoxins; but mainly have to rely on the phagocytes and the antibodies manufactured by nature herself. The question now arises whether our past empirical treatment of disease did any good? If it did, did it not do so by raising the opsonic index? We attempt to sustain the natural power, increase or diminish the secretions, and prevent the entrance of germs—neutralize toxins and let nature do her benevolent work.

Recent investigations in this field places us in command of the means employed by nature for determining the activities of the functions of the body, *i. e.*, drugs or "hormones," which effect their purpose and are then destroyed. We overcome disease by embracing the functional activities of the para-thyroids, adrenals and other ductless glands, and thus cause an excess of "Auto-antitoxins" in the blood and phagocytes. This increase of bacteriolytic and antitoxic property is the real "*vis medicatrix naturæ*." No physician can afford to ignore the latest physiological research, as an explanation of our therapeutics. In closing let me go back to diet. This certainly demands more attention from us as physicians. Physicians should impress on the public and the individual that they eat too much, especially meat. I have pointed out the way of practical application. Gastronomic intemperance is not only interesting pathologically, but economically, and physiologically. I do not believe in the fashion of dieting. Think of that class of health-book reading, always talking, forever dieting people, who never eat half enough, and whose lack of health is a perpetual agony and wonder to themselves. I do not approve of that still larger class who are anaconda-like in their table habits. They forget that the sense of taste lies only in the mouth, and that it may call for more long after the stomach cries

enough. With this as with many other things there is a happy golden mean. The constant meditation that this or that is giving great disturbance, necessarily causes indigestion by suggestion. "Preserving the health by too strict a regimen is a wearisome malady." Dieting is a pernicious habit, and should not

be forced on those not actually ill, and who are discreet in their feeding. Laughter and happiness of mind actually improve digestion, enrich the blood and induce good health. Shakespeare says, "Now good digestion waits on appetite, and health on both."

Short-lived Doctors.—A medical contemporary, says *The Practitioner*, recently drew attention to the fact that doctors are a short-lived class of the community. Laymen were naturally surprised. Their view presumably is that the days of doctors should be longer in the land than those of other people because they know better than their patients what to "take" when they feel indisposed or are in the way of infection. Longevity, however, depends far more upon the manner of a man's life than upon the drugs which he swallows; and it is the doctor's misfortune that the exigencies of his calling often make it impossible for him to practice the hygienic doctrines which he preaches. *Obsta principiis* is one sound maxim on which it is specially hard for him to act. He cannot afford to lay up and nurse himself for trivial ailments, but must often be out attending to his patients in spite of a general feeling of malaise. His night's rest may often be broken though he knows that seven hours sleep is the ideal. He may have to take his meals irregularly, though he is well aware of the virtue of regular habits, or to rush out to an urgent case in the middle of his dinner, though he is always warning his patients that that way lies indigestion. Moreover—if he is a general practitioner—those long holidays which he is fond of proclaiming to be essential are very seldom for him. All these disadvantages count for more in the long run than his acquaintance with the quickest means of relieving a headache or soothing a catarrh; and the sum of the whole matter seems to be that the doctor, who made his own health his chief concern, would have to retire from practice in order to attend to it.

The detection and demonstration of the tubercle bacillus in lupus vulgaris is a more than usually difficult matter. These bacteria are but sparsely distributed in the tissues and secretions of lupus and many examinations may be made before they are found.

Psoriasis is daily approaching nearer and nearer to the line in which is included the list of curable skin diseases. The modern internal treatment will put off a possible relapse for six or eight years, and when it does occur it easily yields to a short treatment to remain absent another long term of years.

The removal of moles which occur on the face should not only be done but should be urged by the physician as they are liable to become epitheliomata when the patient grows older. They should be destroyed by means of the electrolytic needle, care being taken not to produce a scar.

Warts are of so many varieties that a volume could be devoted to their consideration. Neurotic warts are easily caused to disappear by the use of a descending labile galvanic current, and the results appear truly magical. The current should not be stronger than eight milliamperes.—*Am. Jour. Dermatology*.

The catheter is not supposed to work its own way. It is still to be guided and not placed among the automatic drills.

A question which is often asked is why musicians and druggists have long hair. The doctor with long hair believes in yarbs and has little use for calamey and quinan and always carries his collection of dried roots and grass with him. He learned his business from the medicine man.

One of the peculiar errors common to all neophytes in the treatment of genito-urinary diseases is to promise to cure a gonorrhea in a week. It can never be cured, and is sometimes not stopped in two years.—*Am. Jour. Surg.*

A case of carbuncle must never be treated by radical measures until a microscopic examination confirms the diagnosis. Some furuncles are so large and painful as to suggest carbuncle.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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AUGUST

Editorial

The New Era in Medicine is the title of an address given recently before the Florida State Society by Dr. J. H. Hodges, of Gainesville. By the "new era" the writer means the awakening of interest on the part of the profession, interest both in itself and in public affairs, which has been manifest by the activities of county and state societies, under the leadership of the American Medical Association. In this address the author so forcefully brings out the things for which the American Medical Association stands, that parts of his paper are worthy of emphasis. These ideals of our national society are well known to most of us, yet it is well now and then to pause and indulge in a little introspective research, to examine ourselves, to take stock as it were. Somewhat in this line was the address of Dr. J. C. Bloodgood at our own state meeting, under the title of "The Larger Field in Medicine," and of Dr. W. S. Thayer in the oration on medicine at Chicago, the title of which was "Relations of the Physician to the Public: Duties and Opportunities." Both of these addresses should be read by every physician.

Both Doctor Bloodgood and Doctor Thayer emphasized the idea that the

physician is, and must be, more or less of a public character. If he shirk the responsibilities of his position and hold himself aloof from the burning questions of the day, he is not only neglecting his opportunities, but he is failing to do his whole duty to his profession and to his community. It is his duty to take an active stand in the education of the people along hygienic lines, to fight unreservedly ignorance and misconception, to make practical for every day life the lessons which science has taught him, to *do*, as well as to *think*, even to get into the legislature and give the law makers the benefits of his knowledge, if need be. It is also his duty to himself and to his fellow practitioners to study the problems which confront both the individual doctor and our profession as a whole. These problems are many and it is on the correct solution of them that the future of medicine, or at least the practice of medicine, in America depends.

Modern conditions are such that comparatively little can be accomplished by the individual. We are far from belittling the influence which even one strong, fearless, upright advocate of these things can do in his section, yet the influence which can be exerted in any one county, for instance, increases as the square of the number of workers. Two such bulwarks of the truth can do four times the good which one can accomplish, three such can multiply results by ten, for with each addition, opposition melts away, local jealousies disappear and encouraging returns come in. It is through organization, therefore, that much has already been accomplished and through organization that great results will come in the future.

To revert to the new era, as exemplified by the great work of the American Medical Association, let us enumerate the lines along which this work is spreading. They are given by Doctor Hodges as follows:

(1) A higher standard of medical education.

(2) Adequate and uniform medical laws in all states.

(3) Honesty and business integrity in those who supply physicians with drugs.

(4) Enlightenment of the public on those essential principles of medicine which relate to sanitation and the preservation of public health.

(5) For honesty and square dealings everywhere, and for aiding the individual doctor in the struggles which confront him.

These aims cannot well be classified, as has been tried by some, into two divisions, namely, efforts to upbuild the profession and efforts to enlighten the people, for efforts put forward in either direction react in the other. We cannot improve the standard of the profession without benefitting the laity, we cannot educate the people without ourselves receiving the fruits of the labor.

It is for advocating these measures, measures which every honest physician cannot but indorse, whether or not he be a member of the various societies, that the American Medical Association has been assailed. It has been bitterly criticized, and by whom? By him who somehow is hurt by the reforms which are advocated, be he connected with some inferior medical college, be he profiting by unwholesome medical laws, be manufacturing or advertising nostrums which are being exposed, be he financially injured by the awakening of public sentiment on sanitation, or be he in danger of losing prestige from the more general application of the golden rule. Perhaps the most frequent and the most unjust criticism which has been made, and made repeatedly, is that our county, state and national bodies are controlled by a small number of men, a clique, who are in for what they can get out of it. In a few rare instances

throughout the country this may possibly be so; indeed, considering the large number of societies, it would be surprising were it not occasionally true. That such is the case in any county society in Michigan of which we know, of our state society, or of the American Medical Society, we emphatically deny. True it is that a few are prominent, just as there are a few prominent individuals in every government, in every secret society, in every church, and in every walk of life. It is not, however, true that these men who are conspicuous, do not welcome new blood; they not only welcome it, but they beg for help from everyone, both in and out of the society, everyone who can aid in elucidating the vexing problems and assist in bringing to a fruition those efforts which they believe are for the best interests of the profession and the people at large. At our last annual meeting there were numerous delegates active in the affairs of the society, who have never taken part before. It was the most inspiring and encouraging feature of the Manistee meeting.

There are still some of our members who believe that a county society exists merely as a place where papers are read and discussed. Let us not underrate the scientific side. It is surely the most important feature of county society work, but it is not the only feature. Each county society has, besides its scientific work, important duties along the lines advocated by the American Medical Association. The latter is only the great directing force; in the former, the real work must be done, the impetus given, the encouragement supplied.

Many already understand these aims and ideals which dominate the new era of medicine. Many do not fully comprehend them. They will be discussed one by one in this department during the rest of the year.

The County Secretary is the one individual in every community who has the best opportunity for carrying out these plans. It is to him that the profession looks for the initiative in making the local organization a real power in his county. He can accomplish much in making his society worth while. If not, he is not the right man for the place, and the members should see to it that another is chosen. Among every dozen doctors, there is one who has the peculiar talents necessary for a good secretary and changes should be made yearly until the right man is found. Once a good man is discovered, he should be kept in office as long as his loyalty and enthusiasm remain. Don't choose a man for secretary because he is the youngest, choose rather the man with a deep love for his profession, a love engendered by several years, at least, of service; don't choose a man who has much leisure, simply because he has time, for it is always the busy man who does things. Young men, and men with leisure often make good secretaries, but it is rather *post hoc* than *propter hoc*, that they are efficient.

Among the secretaries of our Michigan societies are many most capable and hard working officers. Many of those now in office are responsible for the excellent condition of the majority of the local societies and the state association. Many have obstacles to overcome which are well nigh impregnable. Conditions in one county differ from those in adjacent counties. Problems in one section are different from problems in another. Nevertheless, underlying principles are the same the state over, and the Union over, and a study of these principles and the results achieved cannot be but immensely helpful to every man who has medical organization at heart.

With the idea of bringing the county secretaries together and discussing practical points in the management of the

local branches, a meeting is to be held in Detroit in the early fall. A committee which has been appointed to arrange for this has issued the call, which will be found on another page. Everyone interested in medical organization is invited. The secretaries are urged to come, not only because a profitable, as well as a good time, is promised, but also because a secretary has a responsibility which he assumed when he accepted his office. Even at considerable sacrifice to himself, it is his duty to do what he can to build up his own society. If he feels that he is already doing all that can possibly be done, that his society is as great a success as it can be, then he owes it to the rest of the state, to come and teach others wherein his success lies.

Book Notices

Practical Life Insurance Examinations. By Murray Elliott Ramsey, M. D. J. B. Lippincott Co., 1908. pp. 231.

A new volume on the subject of life insurance may be welcome to many men who are entering the rapidly specializing field of insurance examinations. Dr. Ramsey's book is brief, well written, and illuminating. It might well omit much of diagnosis, which can be found in any good book of general medicine, and include more statistical material, which is the examiner's chief reliance. The peculiar services of the insurance physician demand certain knowledge and points of view that are not often realized by the ordinary physician.

Medical Guide and Monograph Series. Golden Rules of Dietetics. The General Principles and Empiric Knowledge of Human Nutrition; Analytic Tables of Foodstuffs; Diet Lists and Rules for Infant Feeding and for Feeding in Various Diseases. By A. L. Benedict, A. M., M. D. Buffalo, Medical Book and Publishing Co., C. V. Mosby, St. Louis. 1908. pp. 407. Price \$3.00.

This book aims to present in compact form the present knowledge concerning diet, both in theory and in practice. It is neither purely empirical nor purely theoretical, but a combination of

both, in readable form and suitable arrangement. It first treats of the subject in general, from the point of view of foodstuffs, the bodily requirements, and normal conditions; then the diet appropriate for special diseases is taken up. There are numerous tables, recipes, and diet lists, with practical suggestions that usually are known only by nurses and chefs, but which ought to be familiar to every practitioner. The book is decidedly useful.

State Board Questions and Answers. By R. Max Goepf, M. D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Assistant Visiting Physician to the Phila. Gen'l Hospital. W. B. Saunders Co., 1908. pp. 684.

This work will be found invaluable in preparing for State Board examinations. Dr. Goepf has taken great pains to collect the many questions asked by Boards of the various States, eliminating all duplications; so that this work completely covers the questions on all subjects likely to be asked in any State Board examination or in any examination for college, hospital, army, or navy appointments. Further, the questions *with their answers* are so arranged and classified under subjects that the prospective applicant can acquire the knowledge on any branch with the least difficulty.

Consumption, Its Prevention and Cure Without Medicine, with Chapters on Sanitation and Prevention of Other Diseases. By Chas. H. S. Davis, M. D., member of the New Haven County Medical Society, Connecticut State Medical Society, American Health League, Etc. Second Edition.

A syphilitic tubercle should not be cut out. The proper use of mercurials internally and locally will cause their disappearance without leaving a scar or any other indication of their existence.

The patient who is scientific is a bore and the one who thinks he knows medicine is a pest.

Electricity is a magic method in the eyes of the laity; and, in the eyes of a great many physicians it savors of the unknown.

The genito-urinary surgeon is mighty in the land; so is the prostate.

Revised and Enlarged. 12m. 216 pages. Cloth. Postpaid, \$1. E. B. Treat & Co., Medical Publishers, New York.

While so many works on tuberculosis theorize upon the subject, this one shows how it can be treated, and in the large majority of cases cured, without the use of drugs and largely through the patient's own efforts. The author emphasizes the vital necessity of an open air life and a rational system of diet. It is a practical treatise on the subject and leaves nothing to be desired, as all the essential points are thoroughly covered. The present edition, aside from containing additions to several chapters, also has added chapters on Bovine Tuberculosis, The Use of Milk, General Tuberculosis, Marriage and the Offspring, and also gives a list of Tuberculosis Sanatoriums in the United States.

New Edition of Gray's Anatomy.

The announcement of a new edition of "Gray" is of primary importance to everyone concerned with medicine, whatever be his stage or station in medical life.

This new edition, soon to appear, is the result of a thorough revision begun two years ago. In this work Professors J. Chalmers Da Costa and Edward Anthony Spitzka, who occupy, respectively, the chairs of Surgery and of Anatomy in the Jeffersonal Medical College of Philadelphia, have been associated. The possessor of the new "Gray" will have the best issue in which this superb book has ever appeared, and from the foregoing description it may be gathered that it will be a better and more useful book than ever before.

Among the remedies not so frequently employed for skin diseases nowadays as formerly is soap and water. There is less filthiness and the animal parasites (pediculi) of the head and body are not seen as often as in the days gone by. It is very rare to see a case of "Vagabond's disease" or pigmentation of the body due to lice. The disease may yet be seen in certain parts of Europe and Asia Minor where soap is unknown.

A common superstition which is entertained by practitioners of medicine is that either white precipitate ointment or that containing bisulphide of mercury is good for the treatment of skin diseases. This is true if the diseases are syphilitic.

PROCEEDINGS OF THE FORTY-THIRD ANNUAL MEETING OF THE MICHIGAN
STATE MEDICAL SOCIETY, HELD AT MANISTEE, JUNE 24 AND 25, 1908.

Council.

The first session of the Council of the Michigan State Medical Society was called to order by Vice-Chairman Dodge, at 3:00 P. M., June 23, 1908, at Elks' Temple, Manistee.

Present: Councilors Dodge, Dock, Willson, Seeley, Ennis, Spencer, and Haughey, President Ostrander and Secretary Schenck.

The minutes of the last meeting were read and approved.

Secretary reported a communication from Councilor Bulson to the effect that he would be unable to attend the meeting, owing to illness in the family.

In the Annual Report of the Council to the House of Delegates by Vice Chairman Dodge, besides reporting the financial standing of the society, extended recommendations were made on the following subjects: Membership, Appointment of Vice-Chairman, Election of Secretary-Editor and Treasurer, The Journal, County Societies, Post Graduate Studies, District Meetings, Contract Practice, State Defense League, Date of Annual Meeting, Councilors' Expenses, Directory of the A. M. A., Honorary Members, Enforcement of Medical Practice Act, and an hour for a session of county secretaries at the annual state meeting.

The above report, submitted by Vice-Chairman Dodge, after being discussed and adopted section by section, was upon motion by Dr. Dock, supported by Dr. Haughey, adopted as a whole.

Dr. Spencer reported that Kent County Medical Society desired the name of Dr. J. A. Mulhern of Grand Rapids to be placed in nomination for honorary membership, and moved that the Council make the recommendation to the House of Delegates.

Supported by Dr. Dock, and carried.

A recess was taken until Wednesday, June 24.

The second session of the Council, Michigan State Medical Society, was held June 24, 1908.

Dr. Walter R. Parker appeared before the meeting and requested that the Council consider the advisability of allowing from the funds of the

State Society a sufficient amount to cover the expense of the necessary postage used by him in his work in endeavoring to promote the examination of the eyes and ears of school children throughout Michigan.

The request was received and taken under advisement.

As no business had been referred to the Council from the House of Delegates, adjourned to meet on the day following.

The third session of the Council was called to order by Vice-Chairman Dodge at 9:00 A. M., June 25, 1908.

Present: Councilors Dodge, Spencer, Rockwell, Willson, Ennis, Seeley, and Haughey; President Ostrander and Secretary Schenck.

The minutes of the last two sessions were read and approved.

Secretary reported that the recommendation of the Council in regard to obtaining a list of the registered practicing physicians in Michigan from the State Board of Registration was referred back from the House of Delegates with the recommendation that the Secretary of the Council correspond with the Secretary of the State Board and ascertain as to the facts. Secretary asked permission for Dr. Alvord, member of the Board, to address the Council on the subject, which was granted.

Dr. Alvord stated that the Board could not give a list of the registered physicians but could give information as to whether a certain doctor was licensed to practice in Michigan.

The whole question as discussed in the Council's report and at the House of Delegates seemed to have arisen through a confusion of the words "registration" and "license." It is impossible for any absolute record of registration with county clerks to be kept, because the clerks do not keep the Board of Registration (Licensing Board) informed as to the latest additions; nor is such a list very valuable. In any individual case the important point to ascertain is whether or not a practitioner is licensed, and this information the State Board is prepared to give in every in-

stance. An individual cannot register until he is licensed. If licensed, registration is a simple matter. No prosecution should be attempted against a man if he is licensed, even though he has not gone through the form of registering with the county clerk.

An account of \$15 expended by the committee on the Patent Medicine Evil was ordered paid.

Secretary Schenck reported that on the previous evening an informal meeting of the eight county secretaries present was held on the boat to discuss the advisability of holding a meeting in the City of Detroit some time during the coming fall, of all county secretaries in this state as well as members of the Council and General Secretary. Great enthusiasm prevailed at this meeting and it was the unanimous opinion of all those present that such a meeting in September be held, if arrangements could be made for their entertainment at Detroit.

Whereupon Dr. Willson moved that the Council endorse the idea of a meeting in September next of county secretaries and authorize the General Secretary to draw upon the Society for sufficient funds to meet the necessary expense of entertainment.

Supported by Dr. Rockwell, and carried.

Moved by Dr. Haughey that the present Chairman of the Council, Dr. C. B. Burr, be re-elected for the ensuing year.

Supported by Dr. Willson and carried.

Moved by Dr. Willson, that Dr. Dodge, the present Vice-Chairman, be re-elected for the ensuing year.

Supported by Dr. Haughey and carried.

Moved by Dr. Willson, that Dr. Haughey be re-elected Secretary for the ensuing year.

Supported by Dr. Rockwell and carried.

Moved by Dr. Willson, that the Secretary of the Council be allowed fifty dollars for the expenses of his office and fifty dollars for stenographer of the Council for the ensuing year.

Supported by Dr. Rockwell and carried.

Dr. Ostrander, the retiring President of the Society made a few remarks to the Council in appreciation of the support which had been given him during the past year.

Moved by Dr. Willson that the Council adjourn. Supported by Dr. Haughey and carried.

W. H. HAUGHEY,
Secretary of Council.

House of Delegates.

The first session of the House of Delegates was called to order by President Ostrander, at 8:00 P. M. June 23, at Elks' Temple, Manistee, a large number of Delegates being present.

(2) Roll call was dispensed with.

(3) The minutes of the last meeting were read by the Secretary and approved.

(4) The Report of the Council was read by Dr. W. T. Dodge, Big Rapids, Vice-Chairman.

Moved by Dr. Hirschman, Wayne, that the Report of the Council be accepted and the various recommendations be referred to a Business Committee to be appointed by the Chair later in the evening.

Motion supported and carried.

(5) The Report of Committee on Legislation and Public Policy, W. H. Sawyer, Hillsdale, Chairman, was read by the Secretary.

Dr. Robbins, Wayne, moved that the report be accepted and referred to the Secretary for incorporation in the minutes.

Motion supported and carried.

(6) Report of National Legislative Council, A. M. A., Flemming Carrow, Detroit, Michigan Member.

Dr. Gubbins, Calhoun, moved the adoption of the report.

Supported and carried.

(7) The Report of Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State was read by Walter R. Parker, Detroit, Chairman.

Dr. Hirschman, Wayne, moved that the report be accepted.

Motion supported and carried.

(8) Nominations for Committee on Nominations were made from the floor as follows:

J. M. Livingston, Schoolcraft.

W. J. DuBois, Kent.

J. H. Crosby, Kalamazoo.

C. T. Southworth, Monroe.

W. J. Kay, Lapeer.

Moved by Dr. Hirschman, Wayne, that the Secretary cast the ballot of the House for the five gentlemen nominated.

Motion supported and carried.

Secretary cast the unanimous ballot of the House and the above-named committee were de-

clared elected.

Chair appointed the following as the Business Committee:

F. W. Robbins, Wayne.
L. J. Hirschman, Wayne.
G. J. Dickinson, Chippewa.
J. D. Brooks, Kent.
W. C. Garvin, Tuscola.

Dr. Robbins, Wayne, proposed the following change to the By-Laws, Section 5, Chap XIV., by omitting all between the word "physician" and the word "shall," the section reading thus: Each County Society shall judge of the qualifications of its own members; but as such societies are the only portals to this Society and to the American Medical Association, every reputable and legally licensed physician shall be entitled to membership. Before a Charter is issued to any County Society, full and ample notice and opportunity shall be given to every such physician in the County to become a member.

Laid over until the next session, under the rules.

House of Delegates adjourned to meet Wednesday morning at 9:00 o'clock.

Second Session.

The second session of the House of Delegates was called to order by President Ostrander at 9 A. M., June 24, at Elks Temple.

(1) The minutes of the previous session were read and approved.

(2) Report of the Committee on Study and Prevention of Tuberculosis was read by W. E. Coates, Onokama, Chairman.

Moved by Dr. Robbins, Wayne, that the report be accepted.

Motion supported and carried.

(3) On account of the absence of Dr. Hafford, Albion, Chairman, the report of the Committee on the Patent Medicine Evil was not given.

(4) Unfinished business.

The report of the Business Committee was read by the Chairman, Dr. Robbins, and the recommendations were acted upon separately.

"(Majority Report): We recommend that as an experimental meeting the next annual meeting of the society be held during the month of September, 1909.

(Minority Report, Dr. Brook in behalf of Kent

County): We recommend that the annual meeting be held in the spring months as heretofore."

Dr. DuBois, Kent, stated that in his opinion Kent County would have no objection to the holding of the next annual meeting in September merely as an experimental meeting.

Moved by Dr. Southworth, Monroe, that the recommendation of the Business Committee as shown in the majority report be accepted and adopted.

Supported by Dr. Hirschman. After considerable discussion the motion was carried.

"As to the list of practicing physicians legally registered in the state, it is recommended that the secretary of the Council be requested to communicate with the secretary of the State Board of Registration as to the alleged facts set forth in the Council's Report."

Moved by Dr. Hume, Shiawassee, that the recommendation be adopted. Supported by Dr. Southworth, Monroe.

After some discussion the motion was carried.

By Dr. Gubbins, Calhoun, That the House of Delegates recommend that the Committee on Legislation and Public Policy use their best efforts to have such legislation brought about that every physician practicing in a county will have to be registered in that county.

Motion received no support.

"We recommend that the name of Dr. J. A. Mulhern, of Grand Rapids, be placed on the honorary list."

Moved by Dr. Brook, Kent, that the recommendation be adopted. Motion supported and carried.

The proposed amendment to Chapter XIV., Section 5, of the By-Laws was brought to the attention of the House.

Dr. Robbins, Wayne, moved that the amendment be adopted. Dr. Hirschman supported the motion, and asked for a discussion so that all might thoroughly understand what it involves.

After discussions by Drs. Belknap, Berrien; Hume, Shiawassee; Rockwell, Kalamazoo; and Spencer, Kent, and others, the amendment was carried.

Dr. Robbins, Chairman of the Business Committee, stated that the committee has under advisement the matter of Medical Defense League referred to it from the Council, but as yet were not prepared to report.

Dr. Belknap, Berrien, moved to reconsider

the vote by which the amendment to Chap. XIV, Section 5, of the By-Laws was adopted. Motion supported and carried.

Dr. DuBois, Kent, moved that the wording of the amendment be changed to "legally registered practitioners of medicine" instead of "licensed physicians."

Motion supported by Dr. Robbins, Wayne. Carried.

The amendment as amended was then put to vote and carried.

Dr. Leartus Connor, Wayne, addressed the House of Delegates and asked for an expression as to how much ophthalmology is useful to the family physician.

No action taken.

Dr. Haughey, Calhoun, in behalf of the Battle Creek Industrial Association, extended an invitation to the society to meet in Battle Creek in 1909.

Dr. Butler, Kalamazoo, in behalf of the Kalamazoo Commercial Club and the Kalamazoo Academy of Medicine, extended an invitation to the society to meet in Kalamazoo in 1909.

Dr. Robbins, Wayne, moved to adjourn. Carried.

Third Session.

The third session of the House of Delegates was called to order by President Ostrander at 8 A. M., Thursday, June 25.

The minutes of the previous session were read and approved.

The report of the Committee on Nominations was read by Dr. Livingston, Schoolcraft, Chairman.

"Your Committee on Nominations have the honor to report as follows:

For First Vice-President, Dr. J. W. Bosman, Kalamazoo.

For Second Vice-President, Dr. J. A. Christenson, Manistee.

For Third Vice-President, Dr. Sarah Chase, Traverse City.

For Fourth Vice-President, Dr. J. D. Bruce, Saginaw.

For representatives in the House of Delegates, A. M. A., for one year: Dr. A. M. Hume, Owosso, and Dr. T. A. Felch, Ishpeming. For two years: Dr. F. W. Robbins, Detroit, and Dr. Schuyler C. Graves, Grand Rapids.

For Alternate Delegates for two years: Dr.

A. W. Crane, Kalamazoo; Dr. H. E. Randall, Lapeer.

Your committee desire, after due consideration of various places throughout the state, to recommend that our next annual meeting be held in the city of Kalamazoo."

All of which is respectfully submitted."

Dr. Belknap, Berrien, moved that the report of the committee be accepted and adopted. Supported and carried.

Report of Committee on Venereal Prophylaxis, A. P. Biddle, Detroit, Chairman, was read by the Secretary.

Moved by Dr. Belknap, Berrien, that the report of committee be accepted and made a matter of record. Supported and carried.

Dr. Robbins, Wayne, Chairman of the Business Committee, offered the following recommendation:

"In regard to the matter of Medical Defense League, referred to the House of Delegates by the Council, your committee feel that much more time is necessary before it would be willing to make any general recommendation, and would recommend that a committee of five be appointed from the Chair to study the question of medical defense throughout the state."

Moved by Dr. Belknap, Berrien, that the report be accepted and adopted. Motion supported and carried.

Chair announced that such appointment would be made later and the Secretary notified.

Dr. Leartus Connor, Wayne, offered the following resolutions:

WHEREAS, Michigan now has three classes of medical practitioners, viz.: (1) the family physician (general practitioners), (2) the specialist, (3) remnants, as opticians, osteopaths, Christian Scientists, etc. (all persons devoid of adequate training for the duties of physicians);

WHEREAS, Among the remnants are the opticians, who live on the cases of refractive defects neglected by the family doctor and specialist;

WHEREAS, It is discreditable to the medical profession and harmful to the people that any part of medical practice fall into the hands of unqualified persons;

WHEREAS, It being a physical impossibility for the fully trained ophthalmologist to care for all this neglected class, it remains for the family physician to qualify himself to recognize and treat the simple cases (as he does in all the other specialties), seeking expert aid as emergency calls for it, if the medical profession is to occupy its entire field. Therefore be it

Resolved, That the Councilors of the Michigan State Medical Society be directed to take this matter up in their several county societies and so educate their constituents that between the family physician and the ophthalmologist the needs of all the people be fairly and fully met.

Resolved, That the Council request the Michigan State Board of Registration (1) to place among its requirements for a license to practice medicine in Michigan a practical demonstration by the applicant of his ability to recognize and treat simply presbyopia, simply myopia, and simply hyperopia; to recognize and treat the infectious diseases of the eye and the diseases of the uveal tract, and (2) that it co-operate with our Legislation and Public Policy Committee in all practical efforts to prevent an enactment by the Michigan Legislature of a law giving opticians the legal right to practice ophthalmology in Michigan.

Moved by Dr. Robbins, Wayne, that the resolutions be adopted. Supported by Dr. DuBois, Kent, and carried.

Dr. DuBois, Kent, offered the following as an amendment to the By-Laws:

"No paper shall be read by title nor read by any other person than its author, except as result of sickness of author or by unanimous vote of the section to which it belongs."

Laid over under the rules.

Several bills for actual expenses of the Councilors were presented and on motion of Dr. Southworth, Monroec, supported by Dr. DuBois, Kent, were allowed.

Moved by Dr. DuBois, Kent, that the House adjourn.

Adjourned *sine die*.

B. R. SCHENCK.
Secretary.

Society in General Session.

The first session of the forty-third annual meeting of the Michigan State Medical Society was called to order by President Ostrander at 10:30 Wednesday morning, June 24, 1908, at Elks Temple, Manistee.

(1) The meeting was opened by prayer by Rev. J. J. Staley:

Almighty God, our creator and our preserver, Thou who art the giver of life and the preserver of souls, we look to Thee at this hour and regis-

ter our heartfelt thanks to Thee. As we look back upon the past and see what has been accomplished and as we look forward to the future with hope in our hearts that there will be a time when there will be no more sorrow, no more tears, and no more pain, we pray that Thou wilt command Thy spirit to be with these, Thy servants, at this meeting. We pray that their deliberations may be attended by the spirit of God. We pray that all their thoughts and conduct may be made profitable and that they may continue in the will of God and the realization that they are working together with the Almighty. Grant, we pray Thee, that there may come a time when there will be no more sickness, but during the time when we shall need their ministrations, grant that they may administer wisely. We pray in body, mind and spirit that all things shall be in perfect harmony with the will of Almighty God, so that Thy Kingdom shall come, Thy will be done on earth as it is in heaven. We ask this in the name of the Redeemer. Amen.

(2) The mayor of Manistee was unavoidably absent and was therefore unable to welcome the society in behalf of the City of Manistee.

(3) Address of welcome on behalf of the medical profession, was given by Dr. J. A. Christenson, president Manistee County Medical Society.

The city of Manistee has during the past year had the pleasure and honor of entertaining conventions representing various professions and trades, but never in the history of the city has such a distinguished body of men as the members of the Michigan State Medical Society been represented, which is one of the grandest professions to which man is called, because there is no profession where the field of usefulness is so wide as the practice of medicine and surgery. What is greater than to be able to relieve suffering humanity? There seems to be no limit to original research work, and at this meeting we are promised several papers along these lines in both medicines and surgery.

The Michigan State Medical Society meets for its forty-third annual convention. The objects of these conventions are two-fold—educational and social. Some members place all importance on the educational part while others will lay all stress on the social features. Mr. President, I believe that both of these features play an equal part in making the meetings of the Michigan State Medical Society a success. You have brought with you from various parts of the state the educational features. The members of the

Manistee County Medical Society will endeavor to supply the social part. How well we have succeeded you will be better able to say when you return from the barbecue this afternoon. The golden calf has been butchered and prepared, and all things are in readiness for you to eat, drink and be merry, for tomorrow, providing you are still alive, you will return to your respective homes again feeling well repaid for the sacrifice you have made in turning over your practice to the other fellow in your home town for a few days.

We doctors in the northern part of the state do not have the opportunity to listen to medical papers that you have who live near the medical centers of Ann Arbor, Detroit and Grand Rapids, and we will be given a treat in being privileged to listen to the papers here.

In Manistee we have no million-dollar hospital, no medical college, nor do we have a county society numbering two or three hundred members, but we do feel proud of the fact that we have a county medical society of twenty members, every member of which is considered, both here in Manistee and throughout the state, as a "live wire," as you will no doubt learn before we are through with you. We have a model and well-equipped hospital where during the past year eighty-seven major operations have been performed, more than three hundred medical cases treated, and four thousand four hundred and thirty-three salt baths have been given; also in connection with the Briney Inn five thousand and sixty-five salt baths have been given. The curative powers of the salt bath is no longer an experiment, it is a proven fact. These two bath establishments extend to every doctor visiting our city an invitation to inspect their salt bath institutions and also a hearty invitation to partake of a salt bath if you find yourselves in need of a wet or salt bath before you leave.

Fifteen miles north of us, at Onkama, is a sanitarium for the treatment of tuberculosis. Dr. W. E. Coates, the founder of this institution extends an invitation to every doctor to visit it.

The members of the local committee with Dr. James A. King, as chairman, the committee of Elks and citizens in general have spared neither time, nor money in making this medical convention a grand success. If things are not to your liking, do not blame Dr. King for he has worked, and planned, and dreamed of this meeting for several months.

Mr. President, members of the Michigan State

Medical Society, in behalf of the Manistee County Medical Society, I wish to extend you a hearty welcome and invite you to partake of our hospitality while in the city.

(4) The Report from the House of Delegates was read by Dr. Schenck, Secretary.

(5) Address of the President was read by Dr. Herman Ostrander, Kalamazoo. Subject: "Problems of Preventive Medicine."

This address was enthusiastically received.

(6) Dr. Carstens, Detroit, placed in nomination for President for the ensuing year the name of Dr. A. I. Lawbaugh, of Calumet.

This nomination was enthusiastically supported by Drs. Dock, Ann Arbor; Dodge, Big Rapids, and Abrams, Dollar Bay.

Moved by Dr. Carstens that nominations be closed. Motion supported and carried.

Dr. Hirschman, Wayne, moved that the Secretary be instructed to cast the unanimous ballot of the association for Dr. Lawbaugh for president for the ensuing year.

Ruled as contrary to the Constitution.

Meeting adjourned to meet June 25, at 11 a. m.

Second Session.

The second session of the Michigan State Medical Society was called to order by President Ostrander, at 11:00 a. m., Thursday, June 25, 1908.

The report from the House of Delegates was read by the Secretary and approved.

Address of guest of honor, Dr. J. C. Bloodgood, Associate Professor of Surgery, Johns Hopkins University, Baltimore, Md.

Subject: "The Larger Field in Medicine."

By Dr. Dock, Ann Arbor: "At this meeting we have had the honor of being addressed by two gentlemen who have come from some distance to be with us. These addresses have been of unusual importance. Yesterday we had the scientific and highly interesting paper of Dr. Hugh T. Patrick, of Chicago, and this morning we have this extremely stimulating and highly practical address of Dr. Bloodgood, of Baltimore. I therefore would like to move you, sir, that we express our thanks to these gentlemen by a rising vote." Supported and carried unanimously.

By Dr. Hirschman, Wayne: "It is fitting and proper for this association to give some expression of their appreciation to the physicians of Manistee for the royal manner in which the society has been entertained and the beautiful ar-

rangements that have been made for our comfort in every particular; and I move that this society extend a rising vote of thanks to the profession of Manistee for the way in which we have been treated here." Motion supported and carried unanimously.

By Dr. Vaughan, Ann Arbor: "All the good things have not been done by the doctors of Manistee alone, and I move that in addition we extend a vote of thanks to the good people of Manistee, whether in the profession or out of the profession, who have done so much for our entertainment while here." Motion supported and carried unanimously.

Dr. Livingston, Schoolcraft, Chairman of Committee on Nominations, reported as follows:

Your Committee on Nominations desire to report as the result of the official ballot for President of the Michigan State Medical Society for the ensuing year as follows:

Whole number of votes cast, 154, of which 154 ballots were cast for Dr. A. I. Lawbaugh, of Calumet.

Chair appointed Dr. Leartus Connor, an ex-president of the society, to escort Dr. Lawbaugh to the chair, after which Dr. Lawbaugh made a few remarks of acceptance.

On motion the meeting adjourned *sine die*.

B. R. SCHENCK,

Secretary.

Section Elections.

The election of officers for the sections resulted in the choice of Dr. W. M. Donald, of Detroit, as chairman of the Medical Section; Dr. L. J. Hirschman, of Detroit, as chairman of the Surgical Section; Dr. F. C. Warnshuis, of Grand Rapids, as chairman of the Section on Gynecology and Obstetrics.

(Secretaries of sections were elected in 1907 for two years, and therefore retain their offices until the Kalamazoo meeting in 1909.)

Annual Report of the Council to the House of Delegates.

The year 1907 was the most successful of any in the history of the Society, so far as relates to the character of scientific work performed in our component county societies, and in the district and state meetings. It also placed the Society in a satisfactory financial position and closed with the largest paid up membership we have ever enrolled.

Membership—Our membership on June 1st, 1908, numbers 2,074. This includes all living members who paid their dues in 1907, and the new members received this year. The total paid membership for 1907 was 1,973, while for 1906 the number was 1,873.

It is to be regretted that so large a number of members are dropped from the roll each year for non-payment. This list numbered 178 names. The cause of this lies in the county societies and particularly with the local secretaries. There are many societies who never lose a member except from removal or death, and this record should be equalled by all our counties.

Vice-Chairman, Secretary, Editor and Treasurer—The able chairman of the Council, anticipating his prolonged absence from the state, requested the Council at the January meeting to choose a vice-chairman. W. T. Dodge, of the eleventh district, was chosen.

Taking advantage of the absence of our chairman, Dr. C. B. Burr, who is enjoying a well-earned rest in Europe, the Council expresses its appreciation of the able and disinterested services rendered by him to the cause of medical organization. His fine executive ability has been freely placed at the disposal of the State Society. His genial, kind and courtly manner has endeared him to all who have long been associated with him on the Council, and the best wishes of his confreres went with him on his journey. We hope that he may return from his vacation refreshed for his work, and that he may long continue to direct the energies of the councillor body.

Our able Secretary, Editor and Treasurer were unanimously re-elected at the annual meeting of the Council in January.

Finances—

The receipts for 1907 were:

From dues.....	\$3,885.75
Advertising (gross).....	2,158.92
Miscellaneous sources	26.55

\$6,071.22

Disbursements—

Journal expenses.....	\$4,193.06
State Society expenses.....	924.71

\$5,117.77

Balance profit for year.....	\$ 953.45
Bal. on hand Jan. 1, 1907.....	1,227.03

Net balance Jan. 1, 1908.....\$2,180.53

A comparative tabulation for several years gives the following result:

RECEIPTS.

	1904.	1905.	1906.	1907.
Dues	\$3,282.50	\$3,604.52	\$3,290.29	\$3,885.75
Advertising	2,025.92	2,005.30	2,297.78	2,158.92
Miscellaneous	36.18	16.32	25.81	26.55
Total	\$5,344.60	\$5,626.14	\$5,613.88	\$6,071.22

EXPENDITURE AND PROFIT.

	1904.	1905.	1906.	1907.
Printing Journal		\$3,033.45	\$2,791.95	\$2,719.15
Postage, Mailing Journal.....		77.70	51.50	42.00
Total Journal Expenses.....		4,265.26	4,092.94	4,193.06
Expense Acct. Society.....		772.42	1,499.32	924.71
Total Expense.....	\$5,224.91	\$5,037.68	\$5,592.26	\$5,117.77
Profit	\$124.69	\$588.46	\$21.62	\$953.45

DETAILED FINANCIAL REPORT.

The following statement covers all transactions from January 1, 1907, to January 1, 1908:

Cash in the Treasurer's hands, January 1, 1907

1907\$1,227.03

Receipts.

Dues	\$3,885.75
Advertising (gross)	2,158.92
Blanks to County Secretaries...	1.70
Subscriptions, Journals sold.....	8.85
McCormack reprints	4.00
Refund, Mich. State Pas. Ass'n..	12.00
	<hr/> 6,071.22
	\$7,298.30

Disbursements.

Journal—

Printing Journal	\$2,719.15
Mailing (address, put in envl.)	42.00
Postage (2c Detroit members)	95.52
Postage (2nd class, members outside Detroit)	83.73
Salary, editor	300.00
Salary, associate editor.....	287.50
Mailing list	53.25
Adv. commissions, 20% gross.	431.78
Postage	32.35
Office help	60.00
Envel. for Journal (35,000)...	61.25
Printing, stationery, office sup.	9.75
Exchange at bank.....	7.88
Binding	8.20
Telegrams and express.....	70
	<hr/> \$4,193.06

State Society—

Saginaw meeting.....	\$ 70.00
Printing and mailing programs	56.55
Postage	32.35
Office help.....	60.00
Salary, secretary.....	300.00
Exchange at bank.....	7.87
Telephonic, telegrams, express	4.70
Print., stat., office supplies....	58.45
Secretary of Council.....	50.00
Stenographer of Council.....	50.00
Mich. State Pass. Assoc.....	12.00
Council meeting, Jan., 1907...	15.70
Testimonial	100.00
Com. on Contract Practice....	13.89
Com. on Tuberculosis.....	37.25
Com. on Scientific Work.....	5.20
Mimeograph	16.00
Secretary's expense to State and County meetings.....	15.75
Reprints, McCormack lecture..	19.00
	<hr/> \$ 924.71
Total expenditure.....	\$5,117.77
Cash in Treasurer's hands, January 1, 1908.....	2,180.53
	<hr/> \$7,298.30

The Journal.—With pride we call attention to the Journal of the society, which has each year, we believe, improved upon the preceding year. As the society becomes stronger numerically and financially, the Journal will continue to improve. It should represent the best thoughts of the profession in the state, and the membership should

always bear in mind that its Journal but represents the character of the scientific work done at our county, district and state gatherings. If any member thinks that the articles printed therein lack in force and scientific interest, he should aid in correcting the defect by himself contributing to his County Society something of real interest to the profession.

The Journal is the medium through which the intelligence of our profession should speak to the world, and it may be taken as a fair index of the average culture and ability of our members. The work of the Council on Pharmacy and Chemistry of the A. M. A. has made it possible to eliminate many objectionable advertisements. While this has reduced our revenue, it increases our sense of self-respect. Among the list of advertisements dropped during the year are Dioxogen, Hydroleine, Pepto Mangan, Tyree's Powder, Listerine and Ureseptin.

County Societies.—In general, the strong societies have been growing stronger and the weak ones weaker. A few consolidations have been made, and on the whole the standing of the societies is satisfactory.

To provide for missionary work, the council at the January meeting made an appropriation of \$200, to be expended by the Committee on County Societies, with the approval of the chairman of the council, in visiting weak societies; it being understood that any member of the society may be called upon by the committee to make these visits, his expenses to be paid out of this appropriation. So far nothing has been expended from this fund.

Post Graduate Study Clubs.—Many of our societies have established clubs for post-graduate study, as recommended by Dr. McCormack, and it is needless to say that all such societies are in a flourishing condition.

District Meetings.—A large number of district meetings were held during the year. The First District held a successful meeting in Detroit on March 22, closing with a banquet, which was rendered memorable by eloquent after-dinner speeches by members of the profession, bar and clergy.

The Second District held a meeting in December, at Jackson, with a scientific program in the afternoon, closing with a banquet in the evening, which was participated in by influential members of the laity.

The Fifth District meeting, held at Grand

Rapids, was largely attended, and was addressed by Dr. Ochsner and Dr. Denslow Lewis, of Chicago. The social features of the meeting were attractive.

The Seventh District held its meeting at Bad Axe, in October, with a scientific afternoon session and the customary evening banquet.

The Eighth District held a meeting December 10, 1907, at Saginaw, which was highly interesting from a scientific and social point of view, the closing feature being a banquet at the Saginaw Club.

The Eleventh District meeting at Muskegon was a very pleasant gathering, with full attendance. A high scientific spirit prevailed and the local profession distinguished themselves in the way of entertainment.

The Twelfth District held three meetings during the year, at Schoolcraft, Marquette and Houghton. All of them were largely attended and presented the highly scientific programs and agreeable social functions for which the Upper Peninsula is famous.

The president of the society, Dr. Ostrander, attended many of the district meetings and did much to make them successful.

Contract Practice.—The evils of contract practice have been many times brought to the attention of the society. Two counties have adopted a new method of dealing with the subject, so far as relates to county poor work, and their plan deserves consideration and special mention. The county societies of Wexford and Tuscola have contracted with their Boards of Supervisors to do the poor work for a fixed sum, an amount in each case nearer the real value of the services performed than either county had paid before. The work has been divided among the members of the societies, and our reports are that the plan has proved highly satisfactory to the members. This form of contract practice, when all the physicians join in an agreeable arrangement, is to be commended.

The competitive system, in which the worthy poor are turned over to the tender mercies of the lowest bidder, oftentimes a cheap and incompetent man, is to be condemned, and is to be fought by all self-respecting physicians. The lodge contract business is demoralizing to the profession and should be strongly condemned by our society.

State Defense League.—The Wayne County Society has for several years been conducting

a Defense League for its members. Willing to make it a state matter, a proposition has been submitted to the council to turn over to the State Society their defense funds, providing the society will assume the defense of their county members. The proposition has been referred to a special committee for consideration. It should be carefully considered by the House of Delegates. The experience of Wayne county demonstrates that medical defense can be furnished at much less cost than is charged by the companies doing this business. If adopted by the society it will necessitate increasing the dues, and for that reason the advisability of applying it to all our members is of doubtful expediency. The subject is referred to the House of Delegates without recommendation.

Date of Annual Meeting.—It has been suggested that in accordance with the practice of many states the date of our annual meeting can be changed to the fall months, so that our meeting will not come so near to that of the A. M. A. This suggestion is referred to the House of Delegates for consideration without recommendation.

Councilors' Expenses.—Since the organization of the society, excepting the first year, on account of the struggle to keep the finances in good condition, the members of the council have paid their own expenses in visiting societies in their districts, attending the annual meetings, etc. As the finances are now in satisfactory condition, the council by resolution requested its members to present to the House of Delegates bills for their actual expenses during the past year within the limitations provided by the constitution.

Directory of the A. M. A.—It is obvious to all who have given the matter consideration that the directory of physicians published by the A. M. A. is a purely commercial enterprise, entirely without value to medical organization. There was no crying need for a roster of American physicians. This had been provided by commercial houses. There is a need for a complete roster of all County Societies. This is not furnished by the A. M. A. directory, the second edition of which is now being prepared. A simple list of members of all county societies could be furnished by the A. M. A. at very small expense. The present directory forms an expensive volume, beyond the reach or interest of the masses of the profession.

It is no help to organization. We need the publication of a medical blue book containing names of members of county medical societies only. The following resolutions were adopted by the council at the annual meeting:

"We recommend that the House of Delegates adopt strong resolutions along this line, and that copies be sent to the secretaries of all State societies for consideration by their governing bodies.

"Whereas, It is believed that to limit the publication of names in the directory of the American Medical Association to those holding membership in the County Medical Societies would greatly promote membership in their societies; and,

"Whereas, A directory publishing these names alone would be sufficient for the practical purposes of members of the association; and,

"Whereas, Other complete directories of physicians are in existence, which directories are available for the purposes of advertisers needing the larger list; therefore, be it

"Resolved, That in the opinion of the Council of the Michigan State Medical Society, the forthcoming new edition under the auspices of the American Medical Association should be a directory of its members only, and that the council strongly recommend the elimination of all other names therefrom.

"Resolved, That the secretary of the council be instructed to furnish a copy of these resolutions to the publishers of the directory, and to furnish therewith a transcript of the resolutions on the same subject approved by the House of Delegates of the Michigan State Medical Society, in 1905."

Honorary Members.—We recommend that the following resident of our state be elected to honorary membership: Dr. A. J. Mulhern, Grand Rapids.

Enforcement of Medical Practice Act.—In the attempts made in some of our counties to enforce the medical practice act serious obstacles have been encountered, arising from the difficulty in securing a list of the physicians licensed under the Chandler act, and its successors, and the counties in which they are registered. It has been held that a man registered in one county is entitled to practice in all the other counties in the state, and the State Board of Examiners is unprepared to furnish such lists.

This work should be done by the State Board.

but in the event of the board's continued failure to do so, we recommend that the council be authorized to do it. We also recommend that at the annual meeting an hour be set apart in the program for a meeting of the general secretary, the secretary of the council, and the county secretaries, to consider means for the better prosecution of the work of the society. (See proceedings of council.)

W. T. DODGE,
Vice-Chairman.

Report of Committee on Legislation and Public Policy.

Your Committee on Legislation and Public Policy has little to report. There having been no regular sessions of the state legislature during the past year, there was no change in the existing conditions in which the profession is interested.

The special committees have in charge the formulation and promotion of the betterments which have been proposed from time to time, and this committee has nothing to initiate. An amendment to the by-laws introduced last year defines the duty and purpose of the committee as follows:

"After any proposed legislation shall have been endorsed by the council, it shall be referred to the Committee on Legislation and Public Policy, which shall thereupon have it presented for passage at Lansing, and take such steps as may be deemed necessary to secure for it the united indorsement of the medical profession throughout the state, and to that end it shall be the duty of the secretary of this society, under direction of the Committee on Legislation and Public Policy, to have printed and issued to the various county societies, or to each member thereof, as the case may require, circular letters and letters of indorsement, to be addressed by physicians to their representatives at Lansing, asking for the passage of the legislation so approved."

This is a very important co-operation, and should be effective in preventing pernicious interference with existing laws and furthering the passage of righteous measures. Care should be exercised that this power is not resorted to too often, and only after serious consideration. Too aggressive a policy may even be harmful and bring the method into disrepute.

With the improvement of the standard of the medical men, the public are becoming more intelligent and consistent in matters pertaining to public health, and it is only necessary to wage a campaign of education to accomplish any needed reform. A healthy public sentiment is a thing to which appeal can always be made with safety and satisfaction, and to cultivate this is the greatest work of every man.

WALTER H. SAWYER,
Chairman.

Report of the National Legislative Council of the American Medical Association.

The National Legislative Council of the A. M. A., having representatives from each state, met in Chicago December 10, 11 and 12 last, and Dr. Reed, of Cincinnati, chairman, in his report gave us some very interesting matter for consideration, with the request that they be brought before the different county societies and the state societies.

In my report of last year I dealt somewhat at length upon the reorganization of the medical department of the United States army, and tried to draw a parallel between the standing and duties of our present medical corps and the Japanese medical corps. Our medical corps is not up to the prescribed number. It is a very difficult matter to get just such men as we want who are willing to enter the army and navy, particularly the army. It is a very difficult matter to get legislation regarding the standing of the medical corps of our standing army. A doctor in the army has no particular standing, and matters purely medical and hygienic are in the hands of the commanding line officers. That is, the medical department is never consulted as to the location of a hospital, a field hospital, or camp in the time of war. Generally the commanding general selects that himself. We have had some very poor selections of places for camps, which demonstrated clearly the inability of line officers to select suitable locations. We are trying to get a definite rank for medical officers in the army, so that the commanding general may not have the power to locate a camp without first consulting with his medical officer. We would have carried this legislation through the last congress had it not been killed by the arbitrary ruling of Speaker Cannon.

We are seeking to establish a corps of army nurses, women who shall be trained as our nurses

in the better hospitals are trained, establishing for them a rank in the army, regular pay, a certain length of service, and a time at which to be retired on a proper amount of salary. We already have the bill before congress and expect to prosecute it with vigor.

We are attempting to get a corps of efficient dentists for the navy. A number of deaths have occurred at the canal, the result of diseases which could have been managed and cured by well educated dental surgeons.

The hospital corps of the navy has been receiving attention. The navy today depends on a corps of 1,000 men and has but 800. No one seems to care to unite himself with the hospital corps of the navy, whereas it should be the choice of the different branches of service. The pay is small, there is practically no rank or standing in the navy above that of common soldier, and therefore we cannot get intelligent men to enlist in this service. We are working for improvement.

We want a uniform medical practice act. The different boards of medical registration throughout the United States find it very difficult to do business with each other, by correspondence or in meetings, where each state has its own particular law and where it differs so from its sister states. We would like to have the same requirements which are enforced in one state to be enforced in all the states. This would involve a change in our Reciprocity Act. This matter is being brought before congress.

I am very glad to be able to report Michigan's standing to be in advance of the requirements as set forth in the average medical practitioner act.

We are also trying to bring about a uniformity in the food and drug law. This is a very important matter, as nothing much can be accomplished until a uniformity has been established.

I have been requested as representative for Michigan to bring to your notice a bill, or at least to ask you to communicate with our legislature upon the subject of a vital statistics bill. This will be brought to your attention through our county societies this coming winter."

FLEMMING CARROW,

Michigan Member.

Report of the Committee to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State.

Your committee appointed to Encourage the Systematic Examination of the Eyes and Ears of School Children Throughout the State has the honor to make the following report:

With a view to determining to what extent the eyes and ears of the school children throughout the state were being examined, the following circular letter was sent to the Superintendent of Schools.

MICHIGAN STATE MEDICAL SOCIETY.

Herman Ostrander,
President.

R. B. Schenck,
Secretary.

Committee to Encourage the Systematic Examination of the Eyes and Ears of the School Children throughout the State.

Walter R. Parker, Chairman, Detroit.

Charles H. Baker, Bay City.

John R. Rogers, Grand Rapids.

912 Chamber of Commerce Bldg., Detroit, Mich.
Superintendent of Schools.

Dear Sir: In order to determine to what extent the eyes and ears of the school children throughout the state are being examined, the committee appointed by the State Medical Society is sending a copy of this letter to the Superintendent of Schools, and would respectfully request that you furnish the following information:

Are the eyes and ears of the children in the schools under your charge being examined by a teacher or physician?

Answer:

To what extent, and by whom?

Answer:

To what extent, in your judgment, are the pupils benefited by this examination?

Answer:

Very truly yours,

Cities of a population of 5,000 or more were selected and fifty-five letters were sent out. Fifty-two responses were received. Of these fifty-two, nineteen schools are being examined more or less systematically. In twelve examination is

being made by teachers, and in seven by physicians.

In answer to the third question, that is, relating to benefit secured, ten made no reply. Of the forty-two replies received, all agreed that the examinations should be made and that good results would be obtained.

This is a distinct gain over last year, when but five schools in the state were being examined.

Having no funds at our disposal, it is difficult to properly disseminate the literature on this subject. Then, too, it is a matter of education, and all educational movements are slow.

Four states, Vermont, Massachusetts, Rhode Island and Connecticut, have state laws compelling the systematic examination of the eyes and ears of school children. Your committee has been unable to ascertain how practical these laws are or how well they are enforced. We are in communication with the educational authorities in these states, however, and another year should demonstrate the feasibility of the plan and enable your committee to make definite recommendations.

The most practical scheme for conducting the examination is that devised by Dr. Frank Allport, of Chicago. The regular Snellen Test Card is furnished, on which are printed instructions for its use, together with the following:

Facts to be Ascertained.

1. Does the pupil habitually suffer from inflamed lids or eyes?
2. Does the pupil fail to read a majority of the letters in the number XX (20) line of Snellen's Test Types, with either eye?
3. Do the eyes and head habitually grow weary and painful after study?
4. Does the pupil appear to be cross-eyed?
5. Does the pupil complain of earache in either ear?
6. Does matter (pus) or a foul odor proceed from either ear?
7. Does the pupil fail to hear an ordinary voice at twenty feet in a quiet room?

Each ear should be tested by having the pupil hold his hand over first one ear, and then the other. The pupil should close his eyes during the test.

8. Is the pupil frequently subject to "colds in the head" and discharges from the nose and throat?

9. Is the pupil a habitual "mouth breather"?

If an affirmative answer is found to any of these questions, the pupil should be given a printed card of warning to be handed to the parent, which should read something like this:

Card of Warning to Parents.

After due consideration, it is believed that your child has some eye, ear, nose or throat disease, for which your family physician or specialist should be at once consulted. It is earnestly requested that this matter be not neglected.

Respectfully,

.....

School.

These cards can be procured from Almer Coe, 74 State street, Chicago, at a very moderate price.

It is important that the examiner, whether teacher or physician, should not sign the card of warning. This in all cases should be done by the principal and the card sent to the parents. If the examiners do the work for the children, or refer the scholar to certain physicians, professional jealousies are certain to be aroused, and this more than any one thing, unless it be the apathy of the teachers, has retarded the progress of this important work.

In order to emphasize the importance of these examinations, the following, taken from Dr. Allport's reports, are presented:

There are in the United States about 20,000,000 school children, of whom 16,000,000, 80 per cent, suffer from some eye, ear, nose or throat disease which can be easily detected and generally remedied if the public health and educational authorities will only decree that this work shall be done. The neglect in the past has been from ignorance of the facts; in the future, however, it must be from apathy or neglect.

Each year over 50,000 American children are removed from school on account of debilitated physical or nervous conditions brought on by physical incapacity and injudicious mental pressure. Such children, being unable to acquire a suitable education, fall by the wayside, grow up in invalidism and ignorance, and help to fill the ranks of weaklings, the worthless and the criminals.

Unfortunately many scholars suffer from headaches of greater or less severity, frequent attacks of vomiting, and extreme nervous debility due to eye strain, whose eyes appear to be well, and whose vision may be nearly normal. Then,

again, it is not unusual to find children whose vision is down to 40 or 50 per cent without parents or children ever suspecting it. This is common. If the hearing in both ears is defective, it is usually noticeable, but often the hearing in one ear may be low without detection.

It would seem almost unnecessary to produce an array of arguments with the object in view of convincing those having such matters in charge of the necessity of the annual and systematic examination of school children's eyes and ears, for all must admit the necessity of healthy eyes and ears for the ready acquirement of an education.

Respectfully submitted,

WALTER R. PARKER, *Chairman.*

CHARLES H. BAKER,

JOHN R. ROGERS,

Committee.

Report of the Committee on Venereal Prophylaxis.

Mr. President and Members of the House of Delegates of the Michigan State Medical Society:

Your special Committee on Venereal Prophylaxis respectfully submits the following report.

A very careful and serious consideration of the ways and means necessary to aid in the control of venereal diseases leads us to emphasize most emphatically the great need for wholesome education of the public concerning sexual hygiene and venereal diseases. That the time is propitious for the acceptance of such teachings by the public is tested by the favor and earnestness with which addresses delivered by invitation by members of this committee and by other members of the State Medical Society, and by physicians and lecturers all over this country and abroad are received; but a diversity of opinion exists as to the proper means of disseminating such knowledge. This education would ideally proceed from parent to child, but the ignorance of the parent upon such matters, even though of vital interest to the welfare of his offspring, and his inability or unwillingness to impart such knowledge, were it his, practically excludes this source of education. This diversity of opinion extends as to what extent such teachings should be given in the public school, even as to whether any publicity should be given such matters. While we all know that the earlier the age as to which such information may be safely imparted the more forcible and the more

lasting the impression. As to whom, and how, and where such knowledge should be imparted, are still debatable questions worthy of our further earnest consideration.

Your committee firmly believes that the time is not far distant when such matters will be taught without prejudice in the public schools; but for the present the campaign of education had best be presented by those familiar with the subject matter, and through them by those coming in contact with the people in a soberly, orderly manner, as by directors of gymnasiums of Young Men's and Young Women's Christian Associations, and of church societies; by authorized agents of boards of health and County Medical Societies; and by other persons, such as physicians and teachers, who are competent to give truthful instruction unprejudiced by their particular points of view. We believe that a proper knowledge of venereal diseases and sexual hygiene will appeal to spontaneous self interest, instead of to scrupulous self restraint, and will give, therefore, to the movement toward venereal health instinctive strength. To initiate the propagation of such sound and useful knowledge, it is desirable that medical students and physicians themselves be better informed regarding venereal diseases and sexual hygiene, and that the subject of sexual hygiene be given open-minded investigation by authoritative persons, so that false and harmful beliefs, fears and pretenses shall be destroyed. We believe that the real remedy for the scourge of venereal diseases is begun only when physicians and teachers seek to know, to practice and to teach the sexual welfare of the individual and the race unbiased by sentiment, timidity or mistaken scruple.

While we believe a successfully organized educational campaign, such as is now being conducted against tuberculosis, might be inaugurated, a lack of funds and lack of time to devote thereto make such a campaign inexpedient at the present time. It seems to us, therefore, that education by the means outlined above, the method varying with the needs of the particular locality, is the best to be expected at present. It is hoped, however, that in the not far distant future, when venereal health and disease are more freely discussed, the successful campaign against tuberculosis will be made to include a campaign against all other infectious diseases.

Now that the public is beginning to realize the danger of venereal infection to the wedded state, as shown by the recent enactments of

various legislatures, and to appreciate its right to self protection, we believe that it is within the province of this committee, acting in conjunction with your Committee on Legislation and Public Policy, to urge legislation making the marriage license depend upon compulsory physical examination; to urge legislation enforcing registration of all venereal diseases as communicable diseases dangerous to the public health, until the same is upon statute books and enforced.

It is most natural that the individual suffering from venereal infection should be led in his despair, and often false shame, by the alluring promises of quick cures, to seek the advice of the unscrupulous advertiser. Often the unfortunate is driven into unnecessary worry and into unnecessary operations by the exaggeration of the significance of purely functional phenomena. We would, therefore, be derelict in our duty did we not do all in our power to condemn and to prevent, in so far as possible, the improper and untruthful advertising still to be found in our daily press; for, while there has been much improvement in latter years, still cleaner sheets are desired. Nor would we be less derelict did we not, knowing the close relation of alcoholic intoxication to venereal disease, give aid and recognition to those working to lessen its evil influence by securing restrictions of the excessive use of alcohol.

In conclusion, your committee has to report with sincere regret and profound respect the removal from this committee by death of Dr. W. J. Herdman, and more recently of Dr. A. E. Carrier. The best tribute to these men is to worthily, and with their spirit, enthusiasm and courage, continue their good work.

Respectfully submitted,

A. P. BIDDLE, *Chairman.*

A. S. WARTHIN,

WM. E. BLODGETT.

COUNTY SECRETARIES' ASSOCIATION.

The work of reorganization of the entire medical profession has so far advanced that now practically every county in the United States has a County Medical Society, working in co-operation with its State Society and the American Medical Association. It is not necessary to describe the benefits that each member of the profession is

daily reaping as the result of this re-organization. The results are so self-evident that they are indisputable.

The organization being now complete, the question now arises, how and in what way can our County Societies accomplish their full duty in advancing the objects of this organization? The holding of our county meetings weekly, bi-monthly or quarterly and listening to a number of papers and discussions and the report of clinical cases is not sufficient. There is a tendency to become apathetic. The meetings begin to fail to arouse interest, the attendance diminishes, and the society leads a hum-drum existence utterly failing to fulfill its mission in its individual county.

In reading the reports of the various county societies as they appear in our journal, we pick out here and there a county that is alive and active. Its meetings are largely attended, its papers and discussions are timely, interesting and concise. A social feeling predominates. It is active, takes part in and dictates the medical policies in its individual community. It is up-to-date in the medical-civic questions of the day, and it is first in advancing and carrying out the recommendations of national committees. We consequently conclude that that is a thriving, vigorous county society.

What can be done in one county can, almost without exception, be done in every county. You naturally ask "How?" This question has been solved and satisfactorily answered by the states of Pennsylvania and Ohio. They are the pioneers in their efforts to increase the interests and usefulness of their county societies. Their method was to organize the secretaries of its various county societies into a secretaries' association and hold annual meetings.

The growth of a county society is chiefly due to the activity of its secretary. The secretary is the most important individual, he is the one who will make the society a success or a failure. If the society has a good secretary who does good work, it will be a live society, but if by mistake a poor secretary is selected, one who does not do good work, the members of the society will lose interest and a poor society results. The question then again arises, "In what way can we individually make our own society attain its fullest degree of perfection and usefulness?" and again you may ask, "How are we going to obtain better county secretaries?" It is proposed to solve

this question in Michigan by the organization of a Secretaries' Association.

It was the concensus of opinion of the secretaries in attendance at the state meeting held in Manistee, that the holding of an annual meeting for listening to the reading and discussions of papers on such subjects as programmes, dues, clinics, new members, social features, public meetings, bulletins, reading rooms, relationship to our state society and the numerous other questions that daily arise in discharging the duties of a county secretary, could not be aught but of incalculable value to every secretary. Listening to papers and discussions of our brother secretaries and learning how they overcome the difficulties and problems of their office cannot help but make better secretaries, and the application of these new ideas gleaned from these meetings, will in turn result in better and more active county societies.

Dr. Simmons, secretary of the American Medical Association, stated, at the last meeting of the Pennsylvania Secretaries' Association, that "Among the various plans for upbuilding the organization none are more important than meetings of county secretaries for the discussion of those subjects connected with the successful performance of their duties as secretaries."

In compliance with the sentiments expressed by the secretaries present at Manistee, Dr. B. R. Schenck, our state secretary, has appointed Dr. F. C. Warnshuis, of Grand Rapids, and Dr. G. F. Inch, of Kalamazoo, as a committee to arrange for a meeting to be held in Detroit during the latter part of September or the first part of October. This committee has mailed a letter to every secretary in the state, and it is hoped that those who have not answered will make it a point to do so at once. The exact date, the full programme, together with the entertainment features will appear in the next issue of the Journal. The committee will gladly entertain any opinions or suggestions that may be offered. The success of the meeting depends upon every individual secretary and this responsibility should not be overlooked. Bear the meeting in mind. Arrange your affairs so as to attend. You owe it to your own society, and to the profession of Michigan.

F. C. WARNSHUIS,

G. F. INCH,

Committee.

County Society News

Ottawa.

The June meeting of the Ottawa County Medical Society was held at Grand Haven.

Dr. J. A. Mabbs of Holland, read a paper on "What Cases Should Come Before a Coroner's Jury." Dr. W. S. Walkley of Grand Haven, opened the discussion.

Dr. A. T. Godfrey of Holland, read a paper on "The Value of Urinalysis in the Recognition of Disease." (To appear in the Journal.)

The annual picnic will be held the second Tuesday in August.

E. D. KREMERS, Sec'y.

President Roosevelt in accepting the presidency of the International Congress on Tuberculosis, wrote the following letter:
Sir:—

It is with great pleasure that I accept the presidency of the "International Congress on Tuberculosis," which is to meet in this city on Sept. 12, 1908. Official duties, however, may prevent my presiding at the initial meeting of the congress, in which case I will deputize Secretary Cortelyou.

The importance of the crusade against tuberculosis, in the interest of which this congress convenes, cannot be overestimated when it is realized that tuberculosis costs our country two hundred thousand lives a year, and the entire world a million lives a year, besides constituting a most serious handicap to material progress, prosperity and happiness, and being an enormous expense to society, most often in those walks of life where the burden is least bearable.

Science has demonstrated that this disease can be stamped out, but the rapidity and completeness with which this can be accomplished depend upon the promptness with which the new doctrines about tuberculosis can be inculcated into the minds of the people and engrafted upon our customs, habits and laws. The presence in our midst of representatives of world-wide workers in this magnificent cause gives an unusual opportunity for accelerating the educational part of the program.

The modern crusade against tuberculosis brings

hope and bright prospects of recovery to hundreds and thousands of victims of the disease, who under old teachings were abandoned to despair. The work of this congress will bring the results of the latest studies and investigations before the profession at large and place in the hands of our physicians all the newest and most approved methods of treating the disease—a knowledge which will add many years of valuable life to our people and will thereby increase our public wealth and happiness.

The International Congress on Tuberculosis is in the interest of universal peace. By joining in such a warfare against a common foe the peoples of the world are brought closer together and made to better realize the brotherhood of man; for a united interest against a common foe fosters universal friendship. Our country which is honored this year as the host of other nations in this great gathering of leaders and experts and as the custodian of the magnificent exhibit which will be set up by the entire world, should manifest its appreciation by giving the Congress a setting worthy of the cause, of our guests, and of ourselves. We should endeavor to make it the greatest and the most fruitful Congress which has yet been held, and I assure you of my interest and services to that end.

With expressions of appreciation for the compliment conferred in extending the invitation to become president of the Congress,

Very respectfully,

THEODORE ROOSEVELT.

News

The "Journal of the Oklahoma State Medical Association" is a new arrival in the field of state journalism. The first issue appeared last month. The editor is also state secretary, Dr. E. O. Barker, Guthrie.

The medical profession of Maryland have acquired an official organ for their State Society, the "Bulletin of the Medical and Chirurgical Faculty of Maryland," first issue in July, 1908. Dr. H. O. Reik, Baltimore, is the editor.

The Miami Medical College and the Medical College of Ohio have been merged into one institution. This is the eleventh merger in three

years, combining 23 colleges into nine larger and stronger ones.

Dr. R. S. Copeland, of the Homeopathic School of Medicine in Ann Arbor, has resigned, to accept the deanship of the New York Homeopathic College.

Dr. Jos. P. MacCarthy, of Kalamazoo, is attending summer school at Harvard University.

Since Jan. 1, in the District of Columbia, 43 persons have been bitten by dogs suffering from rabies. At the president's request the commissioners have ordered that all dogs in the district be muzzled for six months.

In Columbus, Ohio, a medical society has appointed a permanent committee on Social Hygiene, for the purpose of educating the people as to the far-reaching effects of the "Social Evil," by the dissemination of proper literature, and by members of the medical profession giving talks or lectures before various organizations to men, women, and youths.

Diphtheria is said to have been prevalent in Holland, and smallpox in East Fremont.

Dr. Oscar C. Breitenbach of Escanaba, has been elected president of the Michigan State Water Commission, a sub-committee to the Lake Michigan Water Commission. This commission is composed of surgeons from Michigan, Wisconsin, Illinois, the War Department, and the Public Health and Marine Hospital Service. Its purpose is to ascertain the existing conditions of the water supply; to study them with reference to pollutions and the means of purification; to investigate sewages of towns and cities which drain into Lake Michigan, and the lakes and streams which are tributary.

Dr. James C. Johnson has resigned the post of city physician of Adrian.

The Ionia and Montcalm County Medical Societies held a picnic at Baldwin Lake, Greenville, July 9, as guests of the Belding and Greenville fraternities. Ladies were included, and there were about fifty people in attendance.

Dr. H. A. Grube of Coldwater, has been appointed surgeon in the Soldiers' Home at Grand Rapids.

Dr. Everett Ulrich of Decatur, has accepted a position as ship's surgeon on one of the vessels of the Holland-American line.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Periodic Vomiting.—ARKAWIN reviews briefly the more important literature regarding this interesting and much discussed symptom-complex, and gives a very clear idea of the prevailing theories regarding its nature and causes, without, however, attempting to go into the perplexing subject of the metabolic disturbances associated with acetonemia. From the first, hereditary influences have been recognized as of importance by almost every one who has discussed this subject, and this is the one point of general agreement. Ideas regarding the causes of the attacks are numerous, and widely different. Some consider this an independent disease—a metabolic disorder of uncertain origin—while more frequently it is thought to be merely a symptom. The acetonemia is believed by some to cause the vomiting; by others to be a result, and not pathognomonic. Many believe the condition to be a manifestation of latent hysteria; others consider it a symptom of chronic appendicitis, and cite numerous cases of recovery after removal of the appendix. Still others believe that gastro-intestinal disturbances are the fundamental cause. Each of these views is sustained by clinicians of wide experience and acute judgment, and it is difficult from the evidence at hand to form for oneself a definite opinion. The author inclines from his own experience to accept Heubner's classification of this among the diseases of the digestive organs, citing the tendency to obstipation in his cases, the improvement after the bowels were emptied, and the success attending diet therapy. He noted a decided neuropathic tendency in his patients, but could not detect in any tenderness at McBurney's point, nor was there any evidence of tapeworms, which are capable of causing various attacks of nervous character.

In treatment he recommends moderate diet, chiefly vegetable, at regular intervals, hydrotherapeutic measures, carbonic acid baths, and fresh air.—*Arch. f. Kinderheilkunde*, Vol. 48, p. 98.

Intestinal Fermentation and Test Meals.—SCHMIDT says that to diagnose intestinal starch fermentation from the results of the incubator test, one must have all the signs distinctly present: free gas-formation within 24 hours, lighter color, marked acidification, and pronounced butyric acid odor. In general it may be said that decided early fermentation of the feces after the test meal is only exceptionally and temporarily observed with normal digestion, and that feces fermentation is pathologic when it persists, produces symptoms, and is not relieved by reduction of the carbohydrates in the test meal. SCHMIDT makes use now of a "general test meal," more widely applicable in the polyclinic and in practice than those formerly proposed. The proposals of Zweig and Strauss, Einhorn, and others for simplifications of the test he rejects as founded on false principles.—*Deut. Arch. f. klin. Med.* Vol. 92, p. 471.

Fermentative Intestinal Indigestion.—H. MEYER records 16 cases corresponding almost completely in symptomatology with the Schmidt-Strassburg description. The cause lies in a secretory insufficiency of the glands of the small intestine, probably chiefly functional. This may occur as an independent disturbance, especially in neurasthenic or anemic subjects, or it may be the result of primary gastric disease. The richness of the chyme in starch leads to increased growth of the ferment organisms, such as the yeasts, and the formation of gases and organic acids irritates the intestinal mucous membrane, increasing motor activity and causing moderate diarrhea.

In prolonged cases inflammatory processes may obscure the picture. Treatment consists in diminishing or withdrawing carbohydrates. The true sugars are best tolerated of the carbohydrates, while the most disturbing are potatoes and fresh vegetables. Besides the diet therapy, treatment of the stomach by hydrochloric acid, lavage, etc., must not be forgotten.—*Deut. Arch. f. klin. Med.* Vol. 92, p. 452.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

So-called Phlebitis of the Left Leg.—W. H. BUHLIG describes a case of phlebitis of the left leg occurring in a young man who had an undoubted appendicitis, but was not operated upon. The appendicitis was treated by "rest in bed, rectal enema at the start and then an absolute abstinence from all things by rectum or mouth, except teaspoonfuls of water occasionally." The temperature became normal in ten days, after which castor oil was given and feeding begun. On the tenth day the patient had pain in the lumbar region, temperature 102, pulse 124, with no localizing symptoms. The following day the left groin was painful and the upper half of the thigh swollen, shiny, and tense; pitting was not present. This condition slowly improved and finally disappeared without further complication.

Reasoning from this case, in the light of other cases and the various theories of the etiology, BUHLIG says that all conditions produced by actual operation and its preliminaries can be ruled out; and that bandages, sigmoid pressure, tumors, hot water bags, meteorism, general venous congestion, anemia, were all absent in this case and can be excluded as causative agents. It is probable that mere slowing of the blood current is not a cause of phlebitis, because in typical cases of impeded circulation, phlebitis is not a frequent occurrence. The most likely etiological factor is infection, and the author believes the avenue is by the lymphatics, through the lumbar lymph nodes, spreading downward after the manner of erysipelatous inflammations. —*Surgery, Gynecology, and Obstetrics*, July, 1908.

The Pathogenesis of Ganglia.—W. C. CLARK writes at length upon the etiology of the ganglia that occur typically on the dorsum of the wrist; he reviews the theories advanced by many men, with critical remarks, and a description of his own original investigations in the histo-pathology of ganglia and of synovial membrane. The causation of ganglia has been explained, first, as a hernia of the tendon sheath or a joint capsule, which later becomes closed off by some plastic inflammation; second, as fetal sequestration of synovial membrane; third, as occlusions of synovial crypts that occur in joints and tendon sheaths; fourth, as cystic degenerations de-

veloping in the connective tissue of sheaths and capsules; fifth, as anatomical or newly-formed bursae, distended because of simple inflammation. The author rejects the hernial theory, because ganglia rarely have a hernial neck and rarely connect with an adjacent synovial cavity; they are often multilocular, and they sometimes occur at a distance from synovial cavities. He also rejects the fetal inclusion idea, because of certain embryonic peculiarities of synovial development; the hypothesis of occluded crypts is possible, but improbable, because the ganglion is sometimes so far from the location of crypts; the theory of hydropic bursae cannot be refuted, as there are strong arguments in favor of it, but on the other hand all ganglia cannot form in this way, because bursae would hardly be multilocular, and would not be attached by a sessile base to capsules or sheaths; the explanation by cystic degeneration answers the majority of requirements, but still has some drawbacks. He concludes by saying that "ganglia are rarely hernial protrusions of synovial membranes, frequently distended anatomical or adventitious bursae, most frequently degeneration cysts."—*Surgery, Gynecology, and Obstetrics*, July, 1908.

An Experimental and Critical Study of the Etiology of Chronic Nephritis.—HAVEN EMERSON has conducted experiments on dogs, to determine the effects upon the kidney of puncture, injection of saline solution, adrenalin, and alcohol, and of intravenous injections of gelatin and adrenalin. Great pains were taken to use animals free from renal abnormalities. He concludes that the blood supply of the kidney can be impeded by chemical injury to the renal parenchyma; that a defective blood supply or vascular stagnation underlies many cases of nephritis; that the most frequent causes of circulatory errors are cardiac disease, bacterial toxins, and metabolic waste products; and finally that we might lessen the growing frequency of nephritis by efforts to check the occurrence of infectious diseases, and "to urge moderation in the habits of over-stimulation and over-work, which are prominent in present day life in large centers of population."—*Archives of Internal Medicine*, June, 1908.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

The Epidemiology of Acute Poliomyelitis.—

The epidemiology of this disease is discussed by L. EMMET HOLT and F. B. BARTLETT, who have collected reports of some 35 epidemics prior to 1907, the earliest of which occurred in 1841—five occurring in Norway. The districts covered were large in extent,—the seasonal occurrence strikingly uniform, July, August and September being the most frequent months. As a rule the hygienic surroundings have been good,—but one epidemic occurring in a crowded community and amidst squalor. The association of this disease commonly with any other disease cannot be deduced from the evidence obtainable. Although commonly written of as a disease little dangerous to life, the total cases show a mortality of 12.1 per cent. The great majority of those attacked were under four years of age, but in epidemics more than at other times older children and adults are liable to attack. In an Australian epidemic of 108 cases, 11 were between 10 and 15. The small number and wide distribution of cases in most of the epidemics is striking. There are certain groups, however, which point strongly to either the communicability of the disease from one person to another or to a common source of infection. The conclusions reached are to this effect, viz.—that it is established beyond question that acute poliomyelitis is an infectious disease; that it remains an open question whether the disease is communicable, although these authors think it is, but only to a slight degree. "Positive statements, however, must be deferred until the discovery of the infectious agent."—*American Journ. Med. Sciences*, May, '08.

Hysteria in Children.—As expressive of experience gained in the observation of a considerable number of cases, JOHN JENKS THOMAS reports some 24 cases of hysteria observed in children and discusses its various features. The cases in children were only 5.6 per cent of the total hysterics, a little over 0.1 per cent of all the neurological cases. A like heredity was

found in five cases. Impairment of resistance could be attributed to alcoholism in four cases. Trauma was the most frequent exciting cause. Direct suggestion seems to have played a causal part in some of the cases. The presence of stigmata is rare. Contraction of the field of vision was found twice; anesthesia and hyperesthesia were rare. Points of tenderness were found five times, contractures four times and flaccid paralysis, astasia, aphonia, tremor, each once. Tendon reflexes were often not disturbed, ankle clonus and Babinski's sign were not found at all.

As to infantile hysteria, Chaumier, its chief advocate, maintains that it exists in three forms (1) emotional, as in causeless rages; (2) faintings where infants, agitated and crying hard, suddenly become cyanotic and later relaxed and (3) convulsions, which are short and the only symptoms present.

Heredity, as a cause, this author asserts, rather begs the question, since suggestion is apt to play an important part. Alcohol and tuberculosis have been cited as predisposing causes and Mills includes neglect of physical health, hardship, climate and depleted condition of the blood. Lack of education and training in self-control are very properly mentioned as predisposing factors. The bad effect of parental sympathy and anxiety is frequently met with and is apt to be seen in the case of late and only children.

Very important in diagnosis is the effect of suggestion, sudden cures by this means being especially frequent in children, though intractable cases are not rare. Particularly desirable is the elimination of undue sympathy and solicitude. A second method of this same author, the method of surprise, is invoked to show that tasks heretofore beyond the patient's powers can now be accomplished, this tending to reestablish voluntary control. Sudden or stern commands sometimes serve a useful purpose to this end. Whatever the form of treatment, suggestion cannot be neglected.—*Jour. Nerv. and Mental Disease*, April, 1908.

LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

Concerning the Treatment of Hay Fever.—BERLINER uses the galvanic current for hay fever. His experience comprises in all only four cases which he treated daily during the first week, and afterward twice weekly. He uses two small electrodes upon the nasal mucous membrane, and continues the constant current with the strength of 5 milliamperes for about 5 minutes, upon the sensitive spots of the nose. Since his results were so good he recommends the method for further trial. This procedure is based upon the principle of reducing or completely doing away with, the hyper-sensitiveness of the nasal nerves.—*Deut. Med. Woch.*, 32-13.

The Helmholtz Method of Treatment of Hay Fever, Modified.—BOESSER gives his method of treatment as follows: As soon as the first eye symptom, the typical itching in the inner angle, appears in those disposed to hay fever, he applies to the conjunctiva a few drops of a 1% solution of corticin solution, the most soluble and powerful of all quinine preparations. The corticin is carried in the tears through the tear canals into the lower meatus, and from there into the throat. After a few minutes the burning pain in the eye stops together with the tendency to and paroxysms of sneezing. The effects last generally four to six hours, often longer. It works especially well in the evening before retiring. The patient wakes in the morning not with swollen and reddened eyes, but with them bright and clear. This method the author warmly recommends.—*Deut. Med. Woch.*, 32-43.

Concerning the Value of Sonderrmann's Suction Apparatus in the Diagnosis and Treatment of Nasal Diseases.—HONNETH has tried the Sonderrmann suction apparatus in two groups of nasal diseases, in manifest empyemas, where pus could be demonstrated coming from a sinus without suction, and in cases where there was a suspicion of empyema. In the latter it was demonstrated that when no pus presented as a result of suction as a matter of fact none existed. In the first group also suction gave excellent service in pointing out the exact diagnosis. The time saved in diagnosis is also no small feature. As a matter of therapeutics, the procedure favorably influences the acute inflammations of the sinuses, but as a means of healing a chronic supuration, it is of very little value.—*Mun. Med. Woch.*, 82-49.

Concerning the Favorable Influence of the Internal Use of Potassium Iodid in Tuberculosis of the Upper Air Passages.—GRUNBERG reports that in the Korner clinic for several years potassium iodid one to two grams daily had been used with good result in tuberculous diseases of the upper air passages, especially of the nose, palate, and throat, in addition to the usual local treatment. This is considered as an adjunct entirely, and in no way is specific. Six cases are described in detail. *Zeit. Fur. Ohrenheil*, 53-4.

Nasal Tamponade in Ozena.—SONDERMANN recommends for the removal of crusts in ozena the following simple method. A rubber bag in a compressed position is inserted by the patient into the nasal cavities, and inflated. This remains in position for 5 minutes after which time the air is allowed to escape, and the bag withdrawn. If part of the crusts remain, these can be easily blown out. During the first 8 days, the author recommends using this procedure twice daily. Later once a day suffices.—*Munch. Med. Woch.*, 53-49.

Contributions to the Question of Black Hairy Tongues.—According to AKUNEW there are to be differentiated, two kinds of black tongue. In the first form there is only a pathognomonic coloring of the tongue as a result of abnormal collection of pigment, a product of fungus growths (*Mucor Niger* and others), without local hypertrophy of the tongue papillae. In the second form of disease, for which alone really the name of hairy tongue is appropriate, the appearances of hypertrophy of the papillae filiformens stand out prominently. The brownish black pigmentation of the hypertrophied papillae depends, according to the author's extensive histo-chemical examination, upon the accumulation of an iron pigment in the hyperplastic horny cells. The therapy consists in the very thorough removal of the hypertrophied tongue papillae with a flat pair of scissors, which is done entirely painlessly and almost bloodlessly, followed by a daily pencilling with a 1 to 2% solution of iodine in glycerine. The result of the author's cases was very favorable, no recurrence took place in 45 years respectively for each case.—*Russ. Monatschr. für Ohren-Nasen & Halskrankungen*, 1907.

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Original Articles

THE DIAGNOSIS OF OBSTRUCTION OF THE ESOPHAGUS*

GEORGE DOCK, M. D.,
Ann Arbor.

Obstruction of the esophagus is comparatively rare, but by no means so rare as often seems thought. In the medical clinic of the University Hospital, in the last 17 years, the condition has been noted 32 times, among about 5,000 medical cases. This does not include all cases coming to the hospital, since many cases of spastic obstruction were treated in the neurologic clinic, and some organic cases in the surgical clinic, and others in the throat clinic. Sixteen were cases of cancer of the esophagus, 7 cancer of the stomach and cardiac end, 6 spastic, 1 traumatic, 1 caustic, 1 from diverticulum.

In the majority of cases of esophageal obstruction the therapeutic outlook is bad. This doubtless discourages accurate diagnosis; yet it should not, for, although direct treatment is at present almost helpless in these cases, many even now could be helped by an early operation, and, with improvements in operative technic, such as are sure to come, many more.

In most cases a diagnosis of esophageal obstruction could be made much earlier than now happens. The subjec-

tive symptoms are very suggestive as a rule that has few exceptions, but failure to note them and emphasis upon accidental phenomena, with neglect of instrumental diagnosis, often lead the practitioner astray. Tuberculosis of the lungs, cancer of the stomach, and gastric catarrh are the commonest erroneous diagnoses. In the later stages, when emaciation and cachexia are marked, such diagnosis would occur to any one at first glance, but if the history of the disease is taken skilfully, without forcing the patient's attention from the real facts, the more accurate line of investigation can hardly be overlooked.

In nervous cases there may be many unessential details, in cases of stricture from caustic the early history may have been forgotten, in cases of cancerous obstruction there is not rarely a history of previous stomach symptoms, suggesting gastritis, ulcer or even cancer. But among all the numerous and varied symptoms we rarely fail to get a definite complaint of difficulty of swallowing. This varies in its details, but in the most important cases we have a story of difficulty at first with solid food, especially in unusually large pieces—a bite of apple or meat swallowed hastily, and

*Read at the 43rd Annual Meeting of the Michigan State Medical Society, June 24-25, 1908.

with a pain in the epigastrium such as happens when healthy people commit such an imprudence. Sometimes it is a hot bite or swallow that calls attention to the trouble, sometimes several hasty swallows in succession. In cases of actual obstruction this history is soon repeated, becomes frequent, more distinct, and is no longer limited to the passage of large pieces of solid food. Obstruction to very soft or liquid food may come on rapidly in organic cases, and in spastic cases may from the first be more marked than difficulty with solid food. Along with the difficulty in swallowing we often get a clear description of a sensation of fulness in the course of the esophagus.

Soon after the dysphagia a history of regurgitation of food begins. In some cases—5 out of 16 of my cancer cases—it may be the first thing noted by the patient. It is often neglected in diagnosis because not accurately described by the patient, who often speaks of it as vomiting. Careful questioning will bring out the facts—the regurgitation rather than true vomiting, the little or no alteration of the food. In one of my cases of cancer of the middle of the esophagus, there was forcible vomiting. The time after taking food varies from a few minutes to an hour or more, but is usually not more than 10 or 15 minutes. In general, the food is unaltered, and has no acid or bitter taste, but there are exceptions. In cases of severe obstruction, with ulceration, blood and mucus, and in cases with dilatation above the obstruction sometimes large quantities of mucus are regurgitated.

Either of these two symptoms, obstruction and regurgitation, and especially both together, should lead to an instrumental examination. The latter, however, will usually not be made until the history has been taken in full, and the general examination made. The latter will in rare cases disclose the cause

of the obstruction—e. g., a goitre or other tumor in the neck pressing upon the esophagus, a lordosis, mediastinal tumor, aneurysmal or solid, or a pericardial effusion, a congenital stricture, a traumatic or caustic process or a neurotic history suggesting but not proving the obstruction to be spastic.

The etiologic factors are rarely important and one should not be led astray by them, for they are often useless unless they are direct, as swallowing of caustic or acid. How erroneous conclusions may be was shown by the history of a patient kindly referred to my clinic for examination by Dr. Canfield. The man had swallowed his false teeth four years before and complained of partial obstruction. The probe located an obstruction about 25 cm. Many physicians had examined the patient, but did not believe the teeth were still there, and did not examine to see. They showed plainly in the röntgenogram and Dr. Canfield dislodged them.

The instrumental diagnosis is the essential. Before making it we endeavor to exclude processes, like aneurysm, that might be injured by sounding. In regard to this it should be borne in mind that the most dangerous aneurysms, in this connection, are often impossible to recognize, and on the other hand, one may often pass tubes or probes in patients with known aneurysm without serious consequences.

Although I have never had an accident in the exploration of the esophagus, I never begin it without pointing out that the operation is made necessary by the important symptoms already disclosed.

Probably all prefer to begin the examination with the passage of a soft stomach tube. It is free from danger, and often reveals things that could not be learned by the passage of a sound, such as the existence of retention, decomposition or ulceration at or above the ob-

struction. Occasionally (2 of my cancer cases) we can obtain by the tube collections of atypical cells or even tumor bits (1 case), that enable us to confirm the diagnosis of cancer. As in all cases, the tube should be passed carefully by the operator and not swallowed and the patient should be made to breathe quietly, and not retch. Any one who is in the habit of passing the soft tube can usually distinguish an abnormal obstruction from the post-cricoid narrowing. The latter can be avoided largely by keeping the patient's head forward while passing the tube. The other normal constrictions, as at the arch of the aorta and the diaphragm, rarely cause serious difficulty with the soft tube.

If an obstruction is met, gentle pressure should be exerted to see if it can not be overcome and the patient should be made to swallow. If not, aspiration and siphonage should be used to show the existence and nature of any collection above the obstruction. The distance from the upper teeth should then be marked and noted. In my 16 cases the distance was: 15 cm. in 1; 26-30 in 4; 30-36 in 3; 36-40 in 6; over 40 in 2.

The soft tube in most cases gives all the information we need, but sometimes it fails. Thus it may pass an obstruction of a very important kind, so as to make the operator think no obstruction present, or that the obstruction is purely spastic. I shall mention an example of this kind later, but cite now a case in which there was chronic obstruction with signs suggesting carcinoma. One day the surgeon treating the patient found the tube passed without difficulty, and this continued in the short time preceding a gastrostomy already planned. Death from accident quickly followed the operation, and it then appeared a false passage had formed or been formed in the necrotic mass of cancer.

A remarkable case that I can not explain furnished the specimen I show. A

man of 35, with a history suggesting gastric ulcer for 5 years, had two attacks of vomiting of blood a year before admission to the hospital. He then became comparatively well and remained so until after an attack of "influenza" six months before admission. He then found he was unable to swallow. Food would stay in the esophagus for five or ten minutes, when it would come up, followed by a raising of mucus for 15 minutes. In 3 months he lost 15 pounds. He was then treated in a hospital in a large city for a month, lost 10 pounds more, but was discharged with a letter from his physician, a professor of medicine, stating the patient had had a stricture of the upper end of the esophagus, and had been cured of it, but still had catarrh of the stomach. On admission to the University Hospital the patient weighed only 77 pounds, instead of his normal 120, a loss of 18 pounds in the preceding two weeks. He was extremely weak and cachectic. A soft tube could be passed only 42 cm., the bougie met a firm obstruction at 39 cm. Owing to his condition no further effort was made to explore the esophagus. Rectal feeding was kept up, with albumin water by the mouth, but the patient died five days after admission, and was then found to have the cancer shown in the specimen, in the lesser curvature, growing up into the esophagus.

In passing the bougie it is important to use the largest tips at first, and I might add that the shaft must be long enough to reach the farthest cardiac orifice. I have seen a 42 cm. tube fail to reveal a cardiac obstruction easily demonstrated by a longer one. In using the probe it is not enough to find the obstruction and measure its distance—usually one to three cm. less than that shown by the soft tube. One should also endeavor to learn the lumen and length of the narrowing, as well as the existence of spasm in addition to other

and more permanent causes of obstruction. This is done by careful exploration with smaller tips, one after the other. It is an important fact that in many cases of cancerous, and even cicatricial, as well as inflammatory obstruction, associated spasm is the cause of the most serious obstruction. If this can be lessened by change in manner of feeding, much good can often be accomplished, and in order to make the change, a demonstration of the spasmodic element is essential.

With the exploration by the tube and probe the existence and seat of an obstruction can be learned.

The next thing is to discover the cause. As said before, the history will often clear this up, or the complete examination. The spastic cases usually have unmistakable hysterical manifestations, with histories of trauma (insignificant as a rule), emotional shock, or other assisting cause. In cancer the cachexia and emaciation are only too obvious in most cases when they first appear, but if we are to make a fruitful diagnosis, we must do so before cachexia. Sex and age are also factors. Males are much more often affected than females. Ten of my 16 cases were between 51 and 70, 3 before 40, 3 between 40 and 50. Slight reduction of blood coloring matter is the rule, but the reduction is seldom excessive. In three cases the hemoglobin was 90, 95, 98, with reds 5 million, 4,700,000 and 4,960,000 respectively. In the first case the patient died a month after the examination. In other cases there was marked secondary anemia—low color index, and often with leucocytosis—10,000 to 18,000. The majority of cases have only moderate secondary anemia—60-80 per cent. blood color, with relatively high red count.

But while all these facts assist in giving a clear picture of the patient's condition, there is another aid to exact diagnosis that should be utilized whenever

possible. I refer to esophagoscopy. With Kilian's tubes this is now a valuable and fairly simple matter, though one that can best be carried out by experts. For the last four years I have had the advantage of the skill of my colleague Dr. R. B. Canfield, in the direct examination of esophageal obstructions. In most cases, as might be expected in hospital practice, the examination could only confirm what has been disclosed by older methods. The following case shows how valuable the method may be:

F. C. J., aged 38, had dysphagia, occasional regurgitation, pain in the epigastrium, and lost 20 lbs. in the last 9 months. The patient pointed to the upper end of the sternum and the ensiform as the points where food seemed to stop. He passed a tube himself without apparent difficulty, but when passed by another the tube was stopped at the lower end of the esophagus. Two test breakfasts, removed in 30 minutes, showed low HCl and low peptic power without other abnormalities. Another test breakfast could not be recovered in 45 minutes and the same was true of a full meal in 4½ hours. The fasting stomach was negative. With care in eating the patient was able to take his food. From his manner and the behavior of the esophagus to the tube it was thought by some the case was spastic and neurotic only. On three different occasions, however, with the olive probe, I failed to get through an obstruction at 43 cm. This pointed strongly, of course, to organic stricture. Dr. Canfield kindly examined the patient and though the tube could be passed into the stomach, there was at the cardiac end an obstruction that could be seen as well as felt. The tissue did not appear to be altered, but Dr. Canfield excised a small piece. Examination by Dr. Warthin showed squamous celled cancer.

In such a case operation is, of course,

urgently indicated, but the patient would not consent. The diagnostic importance of the observation needs no argument.

The importance of the esophagoscope is also great in the rare but important cases of polyp, and indispensable in cases of foreign body. In the case of the patient with impacted teeth, mentioned above, the roentgenograph was also of value, as it is in the elucidation of dilatations above strictures as well as of the so-called idiopathic dilatation.

In the differential diagnosis of esophageal obstruction it is a good plan, as suggested by von Leube, to consider cancer last of all. We think of it first in such cases, because from 90 to 95 per cent. are of that kind, but in practice all other causes should first be considered and excluded, either by examination or by careful observation under treatment. In almost all organic cases, including of course cancer, there is nearly always an important element of spasm due to irritation from improper feeding. This can often be checked by care in the selection and swallowing of the food. The patient may gain weight and remain free from severe symptoms many months. One of my cancer cases gained 15 lbs. and was free from symptoms of note for 6 months when cachexia again began to progress. The time of relative relief is the important time for exact diagnosis. A case in the hospital shows the harm that may follow a hasty diagnosis. A man of 54 had symptoms of

gradually increasing stenosis of the esophagus. A diagnosis of cancer was made. After eight years, during which he was able to get along fairly well by care in eating, I examined him and found an obstruction at 18 to 20 cm., due, I thought to a diverticulum, a suspicion confirmed by Dr. Canfield. An earlier diagnosis would undoubtedly have been helpful in preventing the enlargement of the diverticulum as well as in avoiding mental worry.

Purely spastic obstructions are important to recognize early, on account of the emaciation, as well as the danger of dilatation above the obstruction in cases not treated. As an example of this, illustrating the ease with which spastic obstruction can come and go in predisposed cases, I cite the case of a man who came to the hospital slowly starving from obstruction of the upper end of the esophagus. The man had been injured in a railroad accident and his shoulder was kept in a plaster cast for several months and then the cast removed without further care of the joint. From a chance remark of one of the neurologists in charge the patient got his obstruction, which disappeared at once on the passing of a soft stomach tube.

The recognition of dilatations and diverticula, and of secondary changes following obstruction, need not be considered at this time, though their investigation is part of the diagnosis in each case.

In cases of suspected fracture of the skull, percussion-auscultation will be found a valuable procedure where all the other signs and symptoms have been negative. The procedure is the following: The forehead is repeatedly tapped sharply in the median line with the middle finger, the stethoscope being

moved from one point to another from before backward. If a fracture be present, a cracked-pot sound is elicited just beyond it. The corresponding part of the head on the other side should be auscultated to eliminate possible error. —*Am. Jour. Surg.*

ACUTE PERITONITIS*

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In the short time allotted I shall not endeavor to do more than call to your attention a few important facts relative to this great subject.

The peritoneum contains about the same number of square inches of surface as does the skin. Whether it contains stomata, which form entrances to the lymphatics, as the work of Recklinghausen and others would indicate, or whether the peritoneum is an unbroken layer of cells, as MacCallum and others assert, one fact is undebatable, that its power of absorption is great and by some course even organized elements, as bacteria, do pass into the lymphatics and are carried to distant organs in a short time. The power of absorption is greatest in the region of the diaphragm and least in the pelvis; therefore in the closed abdomen the lymph-currents are toward the diaphragm. As the lymph-circulation in any muscular structure is greatly quickened by its repeated contraction, so here the alternate compression and release of the rich supply of lymph-radicles serves the purpose of a pump in carrying away the fluids brought to it by capillaries or peritoneum. For much the same reason the peristaltic and other contractions of the bowel favor rapid absorption. Traumatism of the peritoneal surface also allows a freer access of the contents of the cavity to the lymph-radicles, rendering the individual more susceptible to a true septicemia.

Normal peritoneal fluid has been demonstrated to have bactericidal properties.

It has also been shown experimentally that bacteria, placed in the peritoneal cavity decrease during the first two hours, then rapidly increase for the next three or four hours, and that from this time on there is again a gradual decrease. Murphy, in the light of these facts, remarks that they are of great practical significance, since it appears that "if we can tide the patient over the initial lethal dose [of toxins], the resistance is so enormously increased that recovery is the rule."

Dudgeon and Sargent call attention to the fact that after injections of organisms into the peritoneal cavity, the fluid may be found sterile, while the surface of the intestines and omentum and sometimes the diaphragm still hold bacteria suspended in a coating of fibrin.

While infection of the peritoneum may arise through the circulation, being brought from more or less remote foci of suppuration, the common cause of peritonitis is *perforation*, which may itself be the sequel of appendicitis, cholecystitis, gastric or duodenal ulcer, typhoid fever, or traumatism, as stab or gunshot wounds; or an abscess of the liver or other organ may burst and the leakage directly infect the peritoneum. The direct cause of death is the toxemia resulting from the absorption of poisons produced within the peritoneum or a secondary septicemia, with a general dissemination of the pathogenic organisms. The prognosis depends largely upon the nature and the virulence of the infection. Dudgeon and Sargent say of the staphylococcus albus: "It acts not only

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by promoting a local immunity but it causes sufficient reaction to produce agglutinations and adhesions which tend to limit infection. It appears first and disappears last in all abdominal infections of intestinal origin." * * * 'If phagocytes and staphylococci are abundant in a region remote from the focus of infection, the prognosis is good; if bacilli are present with the phagocytes and staphylococci, the prognosis is grave but not hopeless; if there are a few phagocytes, few staphylococci, and many bacilli or streptococci, the prognosis is grave.' The prognosis is affected also by the location of the perforation; the colon bacillus has been shown to be most virulent in the ileum under normal conditions. That the condition of the bowel is an important factor there can be no doubt. In diarrheas and especially in strangulation or obstruction the virulence of the colon bacillus must rise rapidly. The principle of the artificial method of raising the virulence of bacteria, the so-called "collodion-sac method" is illustrated in some of the conditions preceding perforation. With a good, active circulation and the toxins being filtered away but with the phagocytes at a disadvantage, the micro-organisms gain so rapidly in virulence that when any are spilled the case may be almost hopeless under the best conditions that treatment can afford. It is doubtless true that the same organism growing under varying conditions may be practically harmless or most deadly, depending upon its previous environment. It is claimed that certain of the colon group are capable of becoming the most virulent of the organisms with which we have to deal in peritonitis; the bacillus pyocyaneus is another of those infections in which confinement within narrow bounds raises the virulence in the manner above mentioned. Dudgeon and Sargent believed that it would almost never be found in com-

bination with the colon bacillus under such conditions, but it has been my experience to find this combination both in the unruptured appendix and in the extensive acute peritonitis following appendiceal perforation.

That there is some relation between the virulence of an infection and the power of the peritoneum to protect itself by the formation of a fibrinous exudate is a matter of common observation in the surgical treatment of these cases. It has been supposed that the property of preventing a favoring "wall" from being formed was peculiar to the streptococcus pyogenes, but it would appear to be a sign of high virulence in a variety of infections which by their products break down the defensive barriers, the phagocytes and fibrin formation, before the preliminary reaction is established. This preventing of the formation of a fibrinous exudate is a most deadly quality, since the danger from absorption of bacterial products is greatly increased.

Where the infection is sub-peritoneal, as in puerperal sepsis, the streptococcus is particularly dangerous. It rapidly passes into the general circulation. I will not, however, consider this form of peritonitis; nor is it my purpose to take up those forms depending upon infection with the gonococcus or the tubercle bacillus.

I have chosen to classify those cases as acute general peritonitis in which the coils of intestine are bathed in pus and there have been formed no temporary adhesions and defensive exudate to limit the spread of infection. If in our definition we insist upon the presence of an active inflammatory involvement of all parts of the peritoneum, we shall have no recoveries to record, as we can make positive diagnosis only post mortem. Upon the operating-table we cannot often determine the extent of peritoneal involvement.

In one class of cases, the toxemia is great, and little if any plastic exudate is manifest. The peritoneum loses its lustre, its vessels become dilated, and the microorganisms and their products rapidly find their way into the lymph-channels. There is another class of these inflammations in which the serum and leucocytes are poured so abundantly through the vessel-walls as apparently to neutralize, in a measure, the effect of the products absorbed until a confining wall is built about the area involved. This class of cases, that is, those in which the pus was more or less definitely confined by a plastic exudate, I have excluded from the reports given below, which are all of the generalized type.

Cases of "general peritonitis"—using the term in the qualified sense indicated above—are so common that I will say little of the symptoms. In the most common, or perforative, variety, there is severe pain and it may be with chilly sensations or even rigor at the onset. There is generally nausea; in some cases, vomiting; tenderness, the area of which gradually increases. The pulse is rapid, small and hard. The abdominal muscles are tense, the patient lying with knees drawn up. The temperature may or may not be elevated, the tongue dry and coated. Tympanites may be extreme or the abdomen may be flat and board-like to palpation.

Success in treatment depends upon early diagnosis. If we wait for the development of the classic signs and symptoms, as above outlined, we shall likely lose the patient. In many cases it is dangerous to wait for elevation of temperature or rapidity of pulse. The diagnosis of the conditions which cause peritonitis will make possible the saving of nearly all our patients; at least such diagnosis must be reached while the peritonitis is still local. Every case of appendicitis, for instance, should be diag-

nosed and where facilities are at hand operation performed upon the first day. A carefully studied history is of the utmost importance. The degree and the character of the leucocytosis are of great confirmatory value in determining our course, as well as of decided assistance in prognosis.

From our point of view, at the time when we first see the patient, it is of little moment whether the peritonitis is to remain localized or to become general. From every surgical consideration, the operation should be performed as soon as the diagnosis has been made, unless the patient is moribund or markedly improving.

There may, in some cases, be difficulty in differentiating between mechanical obstruction of the intestine and that caused by peritonitis. In such cases, the history is of importance and the estimation and study of the leucocytes are helpful. Where the obstruction is due to peritonitis, peristalsis will have ceased, borborygmus will be absent, and at some stage of the peritonitis temperature will have been elevated.

A ruptured ectopic gestation has been mistaken for perforative peritonitis. Here also the history is of great assistance; in the former, there is usually history of previous pelvic inflammation, of sterility for several years, of delayed menstruation, of irregular flowing, accompanied, it may be, by signs and symptoms of pregnancy. The indication in either case, however, is operative and the surgeon should be called to share the responsibility. The presence of ovarian or other tumor with twisted pedicle may simulate peritonitis. Such tumor can usually be palpated and is movable. The leucocyte count would likewise here be valuable. Enterocolitis and kinking of the ureter should be easily differentiated. Pneumonia, in children, at times simulates peritonitis. Acute pancreatitis, although rare, must

be considered in some cases.

In perforative peritonitis, while the cause of death is the absorption of septic products, the course is shortened by intestinal paresis, by obstruction due to old adhesions, or by extension of the infective process to a true septicemia or pyemia. In treatment, then, the first consideration is to prevent absorption. The patient should be at once placed in the Fowler position, at his home, during transportation, and at the hospital. Peristalsis must be limited by withholding food and drink, as first emphasized by Ochsner and now very generally recognized as important. If the patient is vomiting, the stomach should be irrigated. For the anesthetic, I prefer ether. In one apparently desperate case of peritonitis following typhoid perforation, nitrous oxide was first administered; the effect was alarming; ether was substituted, with happy results, its stimulating effect being at once apparent.

As before indicated, I operate as soon as the diagnosis is made unless the patient is moribund or unless he is so decidedly improving as to give promise of greater safety at an interval operation. During the past year, I have not refused operation to a single patient, by reason of the desperateness of the case. From the 1st of June, 1907, to the 1st of June, 1908, my records show 22 cases, with two deaths. Both of the fatal cases had advanced to the stage of capillary cyanosis before I saw the patients. Proper treatment had not been instituted until apparently the whole peritoneum had become involved, pus was everywhere in the cavity, and agglutination of the intestines prevented drainage. Both died of toxemia.

Cultures were made from the pus in twelve of these cases with the result that in six the colon bacillus was found alone, in two it was associated with the staphylococcus albus, in two it appeared with the staphylococcus aureus, and in

two only was a streptococcus found.

I make an incision near the point of perforation, if possible through the right rectus muscle, since this admits of an extension of the incision upward or downward without transverse division of its muscle fibres. Where possible, I close the perforation itself; this was accomplished in all the cases herewith reported with one exception.

I never irrigate the abdominal cavity. I never wipe the peritoneal surfaces. In the case of typhoid perforation, I removed the feces from the pelvis by means of moist gauze. Rapidity of operation is important; irrigation consumes time, distributes infection, causes traumatism, and breaks down the protective barriers set up by nature. There is no perfectly normal saline fluid and water in any other form is foreign to cavities and vessels lined with endothelium.

Much has of late been written in favor of the effort to dispense with drainage. I believe in drainage. Continuous relief of tension retards absorption. I pass split rubber-tubing to the dependent pockets, and inside of each of these tubes I place a wick of gauze the more rapidly to drain away products of bacterial growth held in solution. This wick is removed within twenty-four hours. If the peritonitis has developed only shortly before operation, I assume that the active inflammatory process is localized; that beyond the immediate area of perforation the bactericidal properties of the peritoneal fluid and the other agencies of defense may be sufficient to care for the infection, provided the latter is not being reinforced from its primary source. Accordingly, I lay a cofferdam of gauze about the area of the original site of perforation; and this gauze is allowed to remain in place for six or eight days, when the cellular elements and fibrin that have accumulated within its meshes liquefy and it can then be re-

moved easily without opening new avenues of infection. In certain cases, where it is not necessary to lay this cofferdam, it is desirable to bring the tube-drains out through stab-wounds and to close completely the working incision.

The patient is then placed in the Fowler position and normal saline solution is given continuously by rectum by Murphy's "seeping" method. Unless given properly the fluid will not be retained. The rectal nozzle should have several holes about its end; it should be bent about three inches from its tip to adapt its use to the Fowler position. It can be held in position by means of a strip of adhesive plaster if necessary. The fountain should be hung not more than six to ten inches above the level of the anus, just high enough to overcome the intra-abdominal pressure, so that the fluid will be absorbed as rapidly as it enters the bowel. The pressure of the column of water is in the same way kept low enough to permit the easy passage of gas out through the fountain against the continuous inward current of fluid. Fluid introduced by this method, entering directly to the portal circulation by channels the normal function of which is absorption, is more immediately available than when introduced subcutaneously and its administration can be continued almost indefinitely. The fluid introduced by either method makes easier the excreting functions of skin and kidneys, while, with open drainage, secretion from the peritoneum is stimulated and absorption is correspondingly checked.

I am by no means convinced that I have seen any benefit from opsonic treatment in these cases; the opsonic therapy is rather of value in stimulating to activity latent resistance in the presence of chronic infections to which a certain tolerance has been established; I believe that in these acute overwhelming intoxications the index will be found

high, and those cases where this is not true the reduced resistance thus indicated is one of exhaustion rather than of tolerance.

Opium is condemned by Murphy and many others by reason of the tendency to cause poisons to be retained in the intestine, because it masks symptoms, and because, as demonstrated by Dudgeon and Sargent, it inhibits leucocytosis. These arguments are rational; on the other hand, great discomfort and restlessness, especially with children, tend to exhaust the vital forces as well as to distribute the infection. Accordingly, I sometimes use morphine or codeine in the after-treatment and believe they have a place where properly used.

I use no cathartics until the stomach is settled and the symptoms of active inflammation cease, usually not before the fifth day after operation.

If increasing, wave-like pains, perhaps with visible peristalsis, indicate mechanical obstruction of the bowel, I again open the abdomen and endeavor to find and release it. If a paralytic condition of the intestinal walls becomes marked, I perform enterostomy. I have had apparently desperate cases recover after this procedure.

The treatment of peritonitis is essentially prophylactic. This implies early diagnosis, dependent upon an understanding of etiological conditions, and early operation, as is particularly illustrated in the case of acute appendicitis. In some cases the opportunity to save life will slip away if we wait for definite indications in temperature, pulse, and local manifestations. Such indications often become definite only when the case is hopeless.

Finally, let it not be forgotten that the source of infection must be determined and removed before the active inflammation involves a large area. If this can be done, then even a wide-

spread distribution of pus, arising from a process still localized need not prevent our saving nearly all cases; but, if we insist upon seeing rather than foreseeing

the classic signs and symptoms of the generalized process, then nearly every patient will die.

THE VALUE OF UNINALYSIS IN THE RECOGNITION OF DISEASE*

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That an accurate knowledge of the bodies excreted by the urine is of great importance has long been recognized, and most elaborate have been the investigations to determine both the nature and quantity of these substances not only in normal but also in pathological conditions.

We are well aware that normally certain products occur in relatively large amounts and give prominent tests characteristic of certain disorders, while on the other hand, such minute traces of other products are present that their detection is a matter of considerable difficulty to even the skilled chemist.

By experiment we have learned that certain grave disorders are accompanied by the presence of certain substances in the urine, and that where our chemical and microscopic tests are accurately performed we have at hand a valuable aid to the recognition of disease.

It is true that we occasionally find traces of substances appearing in the urine which we are unable to connect with any specific disease or condition of the body, and consequently the detection of those substances is without value at the present time, but the study of such substances is continually going on, and we trust that the time is not far dis-

tant when we will be able to obtain much more valuable knowledge in the diagnosis of disease from an analysis of the urine.

The urinary tract may be subdivided into four parts, namely, the kidneys or secreting part, the ureters or conducting part, the bladder or receptacle, and the urethra with its accessories in the male. Each of these parts may be the subject of pathologic changes and at times it may be very difficult or even impossible from the examination of the urine alone to determine to which part or parts the disease is confined.

We may detect the presence of blood or pus in the urine, but it affords us no evidence as to its exact origin, hence such evidence is only of value in so far as it substantiates other symptoms which indicate the origin and lead us to a diagnosis. In case blood or pus is found, we should then turn to some of the ingenious devices such as catheterizing cystoscopes and urine segregators which enable us to collect the urine from each kidney separately and thus to differentiate the diseases of the upper urinary tract from those of the bladder, urethra, etc. The two and three-glass methods are very commonly used as an aid to our diagnosis in case of the presence of blood or pus.

Upon the discovery of tubercle bacilli

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in the urine, together with other symptoms of tuberculosis, it is not difficult to make a positive diagnosis, provided disease of the bladder and prostate is excluded, and careful cystoscopy and ureteral catheterization will exclude all possible error of bladder or prostate lesions. If successful catheterization shows the absence of tubercle bacilli in the urine coming from the kidneys, it is good presumptive evidence of the absence of renal tuberculosis. When the diagnosis of renal tuberculosis is made, then it remains to be determined by urine segregation which kidney is affected and the condition of the other organ. Thus I might continue at considerable length in showing how tests of this nature might be made to determine the presence or absence of certain infections of the urinary tract, but I assume that each one present is perfectly familiar with all of them so that it would be useless to mention more.

Oftentimes considerable aid to a diagnosis may be obtained from an investigation of the specific gravity, reaction, color and odor of the urine. Great variations in each one of these may occur and from perfectly normal causes, hence we must be cautious in drawing conclusions. A specific gravity of 1.040 or higher would make one suspicious of diabetes mellitus, which suspicion could easily be confirmed by testing for and finding sugar present. A low specific gravity, with small volume of urine, must also call for investigation, as this points to the absence of or marked decrease in the normal constituents of the urine from some cause. A lower density is also observed in diseases where the elimination of urea is slower because of hindered tissue changes, in conditions of malnutrition in general, and in any disease involving the structure of the liver itself. In acute yellow atrophy of the liver, for instance, urea is much diminished, and the specific gravity low.

When the salts consumed are eliminated temporarily in various exudations or effusions rather than by the normal manner there is a low specific gravity. In health the reaction of the urine is always acid, yet there is such a thing as having the urine so strongly acid that much discomfort is caused during its passage. In case of decomposition of the urine in the bladder, we will find an alkaline reaction accompanied by a strong, foul odor. A sweetish odor suggests the presence of sugar. A highly putrefactive odor is also suggestive of trouble.

In pathological conditions the color of the urine is often characteristic and of great importance in diagnosis. The presence of blood is indicated by the more or less sharp shade of red, while a peculiar greenish brown color is suggestive of bile. The urine of diabetes mellitus is usually very pale, while fever urine is usually highly colored.

Blood is often discovered in the urine and then we have the condition called "Hematuria." It may be caused by the following diseases: Malignant forms of acute specific fevers, renal causes such as congestion and inflammation of the kidneys, and may be very trifling in carbolic acid, and catharides, new growths, tuberculosis, stone, certain affections of the urinary passages such as stone in the ureter, tumor or ulceration of the bladder, enlarged prostate, and in traumatism. Hemorrhage is often the first symptom of tuberculosis of the kidneys, and may be very trifling in quantity and amount. Permit me to cite the case of a young man, single, age 22, who was suddenly seized with pain and tenderness in the region of the appendix. Tenderness and muscular resistance were extreme. Very frequent urination attracted attention to the urine. Free blood was found in the urine, and in a few hours a small calculus was passed. This patient might easily have

been operated on for appendicitis had not a urine examination been made.

Pyuria or pus in the urine gives evidence of pyelitis, pyelonephritis, cystitis, urethritis, leucorrhea, and a rupture of abscesses into the urinary tract or passages.

The presence of albumin in the urine was formerly regarded as indicative of Bright's disease, but now it is recognized as occurring under many circumstances without the existence of serious organic change in the kidney. Some questions regarding albuminuria are still a matter of dispute, some good authorities claiming that the presence of albumin in the urine is always indicative of some pathological condition, while other equally good authorities claim that albuminuria may be physiological, as, for instance, in cases following strong muscular exertion, the ingestion of food rich in albumin, violent emotion, cold bathing, and dyspepsia. However, I believe the balance of opinion would support the belief that albuminuria in any form and under any circumstance, may be regarded as a manifestation of change in the renal or glomerular epithelium, a change, perhaps varying in degree, and often transient. Albuminuria of adolescence and cyclic albuminuria, in which the albumin is present only at certain times during the day, are interesting forms. Pyrexia, or fever, of any origin, may cause slight albuminuria, due to slight changes in the glomeruli induced by the fever, such as cloudy swelling, which could never be termed an organic lesion. As instances of the febrile albuminuria, the following case may be of interest.

The patient, Frank H., age 25, had a very severe attack of pneumonia involving the right lung, with increasing dullness of mind. A urinalysis showed a gradually increasing amount of albumin and many casts, showing the severity of the toxemia.

Albuminuria is also extremely com-

mon in diphtheria, typhoid, malaria and even in acute tonsilitis. Albumin is found in hemic changes, such as purpura, scurvy, syphilis, leukemia, anemia, chronic lead or mercury poisoning. The transient albuminuria of pregnancy would also come under this head. Perhaps it is worth while quoting two cases in explanation of this subject:

Case I.—A single woman, age 20, was suddenly seized with constant vomiting, severe headache, apparent delirium. The urine was examined and albumin discovered. The urine was of small quantity—high specific gravity, with a trace of albumin. Microscopically there were no casts, but numerous leucocytes and epithelial cells. The urine examination did not justify the diagnosis of uremia, and a careful physical examination showed the patient to be pregnant.

Case II.—Mrs. L., mother of one child. With this first child there was considerable puerperal toxemia with albuminuria and casts in the urine. She became pregnant again in the course of two years, and consulting a physician, frequent urine examinations were urged. For over five months the urine was normal, after which time the patient neglected to send further specimens for examination. Two months later she was seized with convulsions, with the urine full of albumin and casts, and in spite of treatment she died in 24 hours.

A neurotic albuminuria is often seen after an epileptic attack, and in apoplexy, tetanus, exophthalmic goitre, and in injuries of the head. Albuminuria is also found with definite lesions of the urinary organs, as in both active and passive congestion of the kidney. Also in organic diseases of the kidneys, as in acute and chronic Bright's disease, amyloid and fatty degeneration, suppurative nephritis, and tumors. Albuminuria is also found accompanying diseases of the pelvis, ureters, and bladder, when associated with the formation of pus.

I have all reason to believe that many a wrong diagnosis is made because albumin is found in the urine, and that many a case is diagnosed as Bright's disease when it is something entirely different. I would therefore urge you to rely upon the finding of albumin in the urine as only an aid to your diagnosis, instead of concluding that the complaint is Bright's disease just because a trace of albumin has been found in the urine.

In acute parenchymatous nephritis (acute Bright's disease) the urine will be of high specific gravity, 1025 to 1030, scanty, smoky in color, due to the presence of blood. Albumin present in large amount, and casts of the uriniferous tubules, blood corpuscles, uric acid, urates, oxalate crystals and epithelium. The urine will also be lessened in quantity from one-fourth to one-half the normal amount.

In chronic parenchymatous nephritis (chronic Bright's disease), the urine is high colored, albuminuric, and contains hyaline casts, granular epithelium, the amount of urine increased, and the normal constituents of the urine, particularly the urea, diminished.

In interstitial nephritis or sclerosis of the kidneys, we find an increased quantity of urine, pale color, low specific gravity, small amount of albumin, which may be absent for days, and occasionally epithelial cells, hyaline and granular casts.

Let us next consider what may be learned from the detection of sugar in the urine. Some of our leading physiological chemists hold that traces of a sugar known as dextrose exist normally in the urine; that is, that there may be such a thing as physiological glycosuria as distinguished from the well-known pathological condition characterized by the presence of relatively large amounts of sugar in the urine and called "Diabetes mellitus." The amount of sugar normally present in the urine cannot be

detected by our ordinary tests, but an amount of sugar in the urine sufficient to have clinical importance is readily recognized by many tests. The characteristics of a true diabetic urine are these: A higher specific gravity than normal, greatly increased quantity, light color, speedy to decompose, and an amount of sugar easily detected.

It is well known that sugar may occur temporarily in the urine from a variety of causes, such as from the absorption of several poisons, in carbon monoxide poisoning, also in certain diseases, but in all these cases the amount is very small. The continued presence of sugar is always indicative of only one trouble, namely diabetes mellitus.

Although many investigations have been made on the subject of the normal urinary pigments we are yet unable to give a very definite account concerning them, hence we will not burden your mind by discussing any of them.

We hear a great deal about uric acid being present in the urine, but our knowledge regarding the clinical significance of variations in the amounts of uric acid passed is very defective. It is generally held that there is a considerable increase in the amount of uric acid excreted in fevers and in diseases characterized by diminished respiration and consequently imperfect oxidation. In leukemia there is a pronounced and characteristic increase of uric acid. Great variations in the excreted uric acid seem to be characteristic of a train of disorders rather than a single disease. It seems to have been clearly shown that there is an accumulation of uric acid in the blood in cases of gout.

Urea is the most important nitrogenous substance excreted in the human urine. In the urine of the average man it is between 30 and 40 grams, while in the urine of women it is less. In diabetes mellitus, and insipidus, and also in fevers, urea is increased in total amount,

although it may be diminished in percentage. Clinically, the increase in diabetes and fevers is of the greatest interest because we there have evidence of increased consumption of the nitrogenous tissues of the body. In acute yellow atrophy of the liver there is always a diminished amount of urea.

So we might speak about the significance of lithuria, oxaluria, cysturia, phosphaturia, indicanuria, melanuria, pneumaturia, and other substances in the urine, but as tests for these substances are not usually made by the physician engaged in general practice, we will not take your time to discuss any of them.

In closing, we would say that any attempt to make an accurate diagnosis of any case by the presence or measurement of any substance in the urine is

fallacious in the extreme. The most reliable data about the urine are those most easily, simply and quickly obtained. By a comparison of autopsy findings in the same cases, albumin and casts in the urine do not always mean that a pathological nephritis is present in the case, and, on the other hand, that a true pathologic nephritis may be present without the presence of albumin or casts in the urine. Let us therefore be careful not to diagnose any case from one or two symptoms alone, because in the examination of the urine certain findings do not always warrant a diagnosis. The true value of urinalysis in the recognition of disease lies only in the fact that certain findings, together with other symptoms of disease, may aid us greatly in making an accurate diagnosis.

CONSERVATISM IN THE SURGERY OF THE UTERINE ADNEXA FOR THE PRESERVATION OF THE POSSIBILITY OF PREGNANCY*

G. VAN AMBER BROWN, M. D.,

Detroit.

The history of conservative surgery of the pelvis, in the way of opening up pus tubes and pelvic abscesses by rectum or vagina, dates back for centuries. In 1831 Recamier opened into an ectopic gestation, thinking that he was dealing with a pelvic abscess. Then followed a period in which the surgeon found that the introduction of asepsis had enabled him to enter the pelvic cavity with a lower mortality, and for years the surgeon ruthlessly and needlessly sacrificed ovaries and tubes until Jacobi, as an internist, and William H. Polk, as a gynecologist, sounded the warning, Jacobi

stating that he preferred to have most of those ovaries left in his patient's abdomens to seeing them in a surgeon's jar; Polk warning us to be slow in laying operative hands upon the tubes in acute salpingitis. Closely following this, the fight was taken up by men such as Boldt and Martin of Germany; Pozzi of France; Webster, Kelly, Martin, Clark, and others of this country, chief of which was the late Dr. Dudley, until in this connection their names are known throughout the world. From this, step by step, we have learned that disease of tubes and ovaries does not mean their extirpation.

*Read at the 43rd Annual Meeting of the Michigan State Medical Society, June 24-25, 1908.

No longer do we remove an ovary that is micro-cystic, for, as shown by Welch and Wylie, it is not a pathologic lesion of such proportions as to justify such a procedure; nor do we remove a tube because it has been twisted or kinked by adhesions. The saving of these has been adopted now as a matter of course, and we are today busying ourselves with the more difficult problems of conservatism in gynecological surgery.

Conservative work on the ovary has lately been very satisfactory with regard to the occurrence of pregnancy. Resection of the tube has been unsatisfactory in this respect. Still, as a result of the good work that has been done along these lines in very recent years, I believe that we have devised means by which these organs may be treated so as to secure health to the patient without robbing her of the possibility of pregnancy. It is by briefly reviewing the physiology of the mechanism of impregnation and the newer surgical measures that I hope we shall be still further encouraged in this effort.

Physiology.

In an uncertain proportion of instances the ova find their way into the Fallopian tube, thence into the uterus. The means by which this is accomplished has given rise to much speculation and many interesting experiments. Several theories are advanced. The one most generally accepted at present is that the ovum is carried into the ostium abdominale by the current created by the ciliated epithelium, whose movements are always toward the cervical canal. These cilia are found throughout the fimbriae, tubes, uterus and upper part of the cervix.

The ovary, which is covered with short, columnar epithelium, probably has constantly flowing over its smooth surface a liquid which is directed by the

ciliary current toward the tube. For example, it may be supposed that a graafian follicle is ruptured when the fimbriated extremity of the tube is not applied to the ovary (for it is difficult to understand how it can be intimately applied to the ovary, especially to exert any appreciable pressure, since it has no erectile tissue), and that the liquid of the follicle, along with the ovum, takes the same course.

It is to be remembered that the conditions dependent on the currents of the liquid directed by the movements of the cilia are constant, and could influence the passage of an ovum at whatever time it might be discharged, while the muscular action would not be constant. Since the ovum is but 0.25 m.m. in diameter, there seems to be no reason to question the power of the current to draw it into the tube without invoking the aid of muscular action. Foreign bodies stained and thrown into the pelvic cavity of animals are later found in the tubes and uterus; indeed, facts are accumulating showing that this current is capable of carrying the ovum from the ovary of one side to the tube of the opposite side, and is known as *external migration*, and is perhaps not as infrequent as would at first be thought. The passage of an ovum from an ovary down the tube of the same side is *internal migration*.

The fact has been pointed out that in animals with a bicornate uterus the ova may be liberated from the ovary of one side, as shown by the presence of the corpora lutea, while the embryos are developed in the horn of the opposite side. For further evidence that the ovum is discharged into the pelvic cavity and may travel in the narrow spaces between the viscera to the tube of the other side, the ovary may be excised on one side and the horn of the uterus on the other and the animal become pregnant following copulation. That this

truth is maintained in the human is evidenced by the case of Kelly in which he removed the left ovary and the right tube from a woman who fifteen months later was delivered of a child at term, and by my own case to be reported in this paper.

Surgical Measures.

To attempt to specify the precise conditions under which we may conserve the adnexa so that pregnancy may become possible is not an easy task. Great care must be exercised in the choice of cases, also the operative process. The operator must also consider whether his patient is likely to be cured, if she will be improved, or if the disease will advance and her suffering continue. At present, however, it will probably be pretty generally conceded that the following operations may be done in a very large percentage of cases: Saving of ovaries containing large graafian or corpus luteum cysts, hematomata, fibroid tumors, dermoid cysts; suspending ovaries that are prolapsed; saving a sound ovary or part of one with a sound tube or part of one on the opposite side; saving the ovary on one side with extra uterine pregnancy on the same side; saving ovaries or tubes that are mutilated in being liberated from adhesions, drainage of pelvic abscess, or an inactive hematocele. The resecting of a portion of a tube is a procedure occasionally made necessary by myoma or extra-uterine pregnancy, but generally made so as a result of certain inflammatory processes, a field in which conservatism has not been very closely outlined; however, the indications as laid down by Webster seem to be quite proper, in which he says: "This procedure must never be carried out if any indications exist pointing to active infective process; e. g., elevation of pulse and temperature, leucocytosis. There should not have been any history suggesting infec-

tion within, at least, six months. If the tube contain pus, the operation is not advisable unless distension of tube has been known to exist for many months. Bacteriologic tests of the tube contents are alone capable of determining their sterility, but unfortunately these cannot be made in the process of an operation, though of course slides may be examined to determine whether or not germs are present. Yet, negative results are not proof of sterility. If the inner end of the tube be much thickened the lumen is not likely to be of sufficient caliber to insure the passage of an ovum, even though resection be performed, and such a condition should be regarded as a contra-indication to the operation."

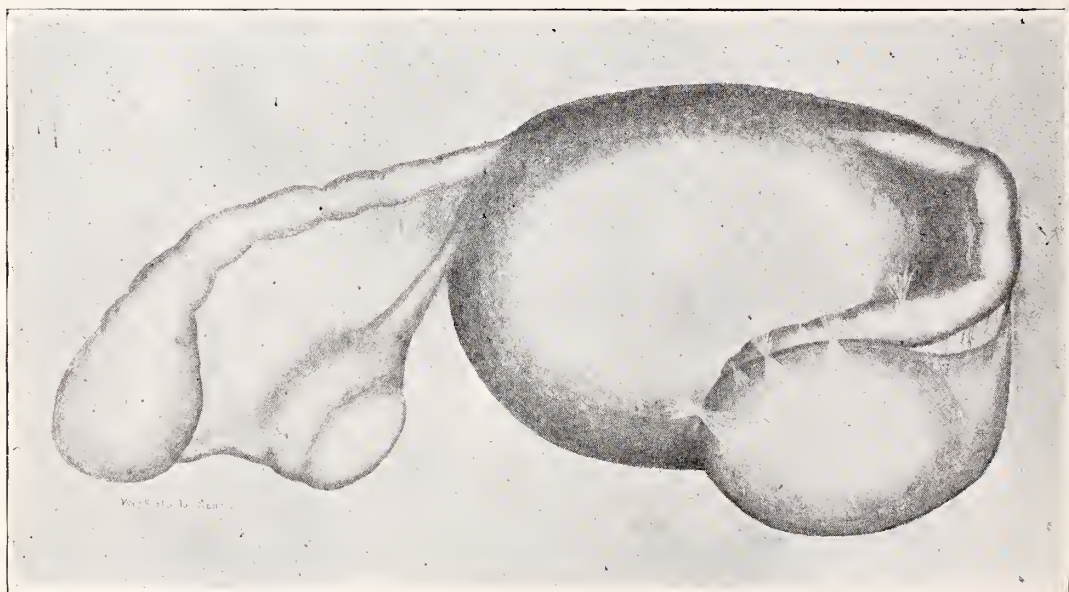
Unfortunately, pus cases are found principally in very young women, and for this reason especially one feels most anxious to apply conservative principles; yet one hesitates, as they are usually followed by such disagreeable symptoms. However, we meet with brilliant exceptions. In hydrosalpinx and hematosalpinx there is practically no risk from infection in performing a resection, neither is there much when the fimbriated end is buried in adhesions, the tube not being thickened or distended or its lumen closed. Of further interest in this connection, the experiments of Fraenkel, which were carried out at the suggestion of Born, would lead us to believe that the removal of ovaries during the early part of pregnancy will probably terminate it. Fraenkel removed ovaries from rabbits from one to six days after copulation, in order to decide whether the ovary exercised any influence on the growth of the mucous membrane of the uterus and its preparation for the fixation of the ovum. On subsequently killing the animal it was found, in every case, that the extirpation of the ovaries had prevented the fixation of the ova. If, however the ovaries were removed after the fourteenth day of the preg-

nancy, which in the rabbit lasts about thirty days, the animals went on to full term and healthy fetuses were produced.

Technic.

By the abdominal route, as soon as the peritoneum is opened, towels are placed so as to protect the surrounding organs from contamination, should infectious material be encountered. Adhesions are slowly and carefully broken up, and the condition of the adnexa on either side studied before repair is be-

from the uterus as conditions will permit, then a probe is passed to prove that the lumen of the tube is not destroyed. The incision is an oblique one, to give a larger ostium; if the opening be small, it may be considerably enlarged and nature more nearly imitated if the tube is incised for an inch or less along its upper margin; next, approximate the mucosa to the peritoneal covering about the opening in such a manner as to evert the mucous membrane. For this, interrupted sutures of plain fine catgut are



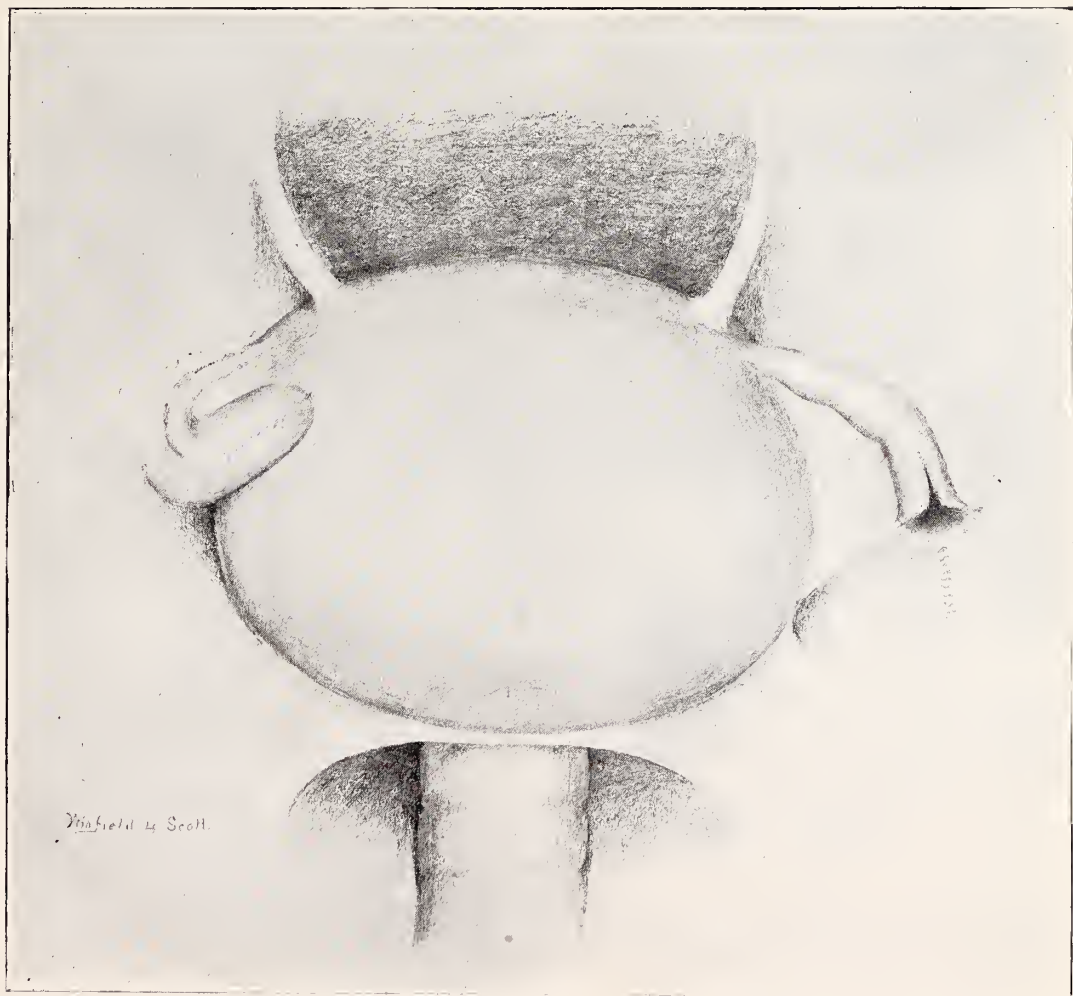
gun. If an ovary is to be resected, it is held by forceps placed close to either side of it at the edges of the infundibular and ovarian ligaments, and with knife or scissors the diseased or torn portion is removed, leaving on the remnant an elliptical raw surface. The raw edges are brought into close apposition with a fine plain catgut suture, either interrupted or continuous. Ligatures are unnecessary. In resection of the tube, the outer portion is to be removed, making the incision, with scissors, as far

used. The lumen may then be swabbed out with any appropriate antiseptic solution. The distal angles of the incision are now turned outward and stitched to the meso-salpinx in such a manner as to give the tube a bell-like appearance. Although I have not used it, it would seem to me that the use of the cautery, burning the edges until they are charred black, would probably prevent formation of adhesions. The edges of the meso-salpinx, from which the outer end of the tube has been removed, are now

stitched in apposition. Iodoform gauze is placed into the pelvis as a safeguard against possible infection; one end of the gauze is placed in the vagina for convenient removal and the abdomen closed.

Let me here call attention to the mat-

that as a further aid to the bringing about of pregnancy following conservative operations, the patient be instructed to always, for several days following coitus, assume either the exaggerated Fowler's or standing position. By her doing this the ovum would gravitate to-



ter of posture, which I think worthy of consideration. The natural drainage of the intra-peritoneal cavity is by way of the abdominal current, through the diaphragm, and it is known that large particles are taken up at this point. In view of this fact I offer this suggestion,

ward the pelvic current and from the abdominal current.

Results: John G. Clark, in a private correspondence, states that out of 75 letters of inquiry which were first sent out, 22 inflammatory cases operated conservatively were heard from, as follows:

- 9 are entirely well;
- 12 have pelvic nervous symptoms at the menstrual period;
- 15 have more or less menstrual pain;
- 4 claim to be no better than before operation;
- 1 has become pregnant since operation and went to full term.

As a summary, 18 out of the 22 are better than before operation—ranging from moderate relief to complete cure.

Brothers reports from 160 cases operated conservatively as follows:

- 2 died.
- 26 tubes, 2 unsatisfactory.
- 44 ovaries, 6 unsatisfactory.
- 90 tubes and ovaries, 7 unsatisfactory.
- 85 have since reported; out of these,
- 6 were operated a second time:
 - 1 ovary,
 - 1 tube,
 - 4 tube and ovary.

In other words, 7% came to second operation; 7½% became pregnant—though, like Clark, he does not say in what per cent of these cases these possibilities were conserved. The general results, he states, compare very favorably with the more radical operations producing:

- Cessation of menses;
- Hopeless sterility; and
- Nervous breakdown.

From my own practice, out of cases operated conservatively, 22 were heard from, and I offer the following report for what it is worth:

- 12 were non-inflammatory;
 - 10 were inflammatory;
 - 00 died;
 - 11 are well;
 - 8 improved;
 - 2 are no better;
 - 3 were operated upon lately, too soon to report.
- Of the 19,
- 17 are improved or well. Of these,
 - 12 (3 inflammatory, 9 non-inflammatory) cases were operated to conserve for pregnant possibilities, three were operated during the last few weeks. Out of the 12, eight are married, and two pregnancies have occurred: 1

non-inflammatory; 1 inflammatory (the non-inflammatory aborted by design; the inflammatory went to full term, and I will now report it in detail):

August 1st, 1906, Mrs. E. L., age 27, slender, weight 103, usual weight 130, house wife, had chorea at 14 years, married at 17; 5 months after marriage had miscarriage; one year later had a boy at full term; 7 months after confinement, had a miscarriage. Not pregnant since. Menstruates regularly 60 hours out of each four weeks. At present complains of the following symptoms, which have existed for nine years, except that they have grown more pronounced of late. She has an irregular appetite, tongue is coated, is sensitive, has weak feeling in abdomen, no sexual desire, complains of chills at times and feels like choking; head aches, has tired back and legs, slight vaginal discharge and constipation. Examination revealed the following:

The right kidney freely movable; perineum torn; adhesions about clitoris; cervix torn bilaterally; uterus retroverted; left ovary enlarged and prolapsed.

Operation August 3rd, 1906. Dilated cervix, curetted uterus, repaired cervix and perineum, dilated rectum, removed rectal papillae, freed adhesions of clitoris; opened abdomen, breaking up adhesions, removed left ovary—which was completely destroyed by cystic degeneration—removed right tube which was thickened and distorted. The right ovary, which contained a small cyst, was torn in removing it from its bed of adhesions, and was repaired and then suspended by the utero-ovarian ligament to the posterior surface of the right side of the uterus. The condition of the tubes and ovaries previous to operation is fairly well represented in drawing No. 1; the condition after operation is very well shown by drawing No. 2. At the same sitting a Gilliam's suspension was done, also a kidney fixation. She made an uneventful recovery, leaving the hospital on the 19th day. On July 16th, 1907, eleven months and thirteen days after the operation, she was delivered at term of a healthy boy. This is, I believe, the first case to be reported where pregnancy followed so highly conservative an operation.

Condylomata lata are best not removed by the knife or scissors. They are very vascular and excision does not prevent their recurrence. Local measures not surgical are numerous and successful.

The irritation or so-called stimulation of venereal or genito-urinary diseases is not to be commended. Instead of improving them it makes them worse and the cure of the original trouble is not only retarded but made more difficult.

THE COUNTRY SURGEON*

H. B. GARNER, M. D.,
Traverse City.

During the rapid strides of medical science, and the great tendency on the part of the medical profession to specialize, wherein the specialist appears before the public, like sparkling diamonds among the sand, you can readily appreciate that a condition like this does not offer to the plain country surgeon the standing and credit that rightfully belong to him. Without good, practical sense associated with sound reasoning in the field of general medicine, there can be no solidity of surgical judgment.

The good judgment, the delicate touch, careful manipulation, and the art of discrimination, that demonstrate now (as always) the finished surgeon, are not acquired in the lecture rooms nor by the post-graduate talks, given by the professors of this country or Europe, but can only be obtained by first gaining a thorough understanding of anatomy, followed by practical experience at the operating table; it is not the man who can simply cut, but the one who knows when to operate and when not, who can carve his name into the temple of surgical fame. It has been said, and often intimated by city physicians, that we country doctors are asleep, and afraid of doing our surgical duty; on the other hand, we have on many different occasions been severely criticized for attempting to perform any abdominal surgery. How different is the language of Samuel D. Gross, who asked God to bless the country surgeon, for this old master of American surgery says that it is the country surgeon who often

leads the way into the hither-to unexplored fields of surgical ignorance, where the city surgeon (under like circumstances) would have found it difficult to follow.

I am a firm believer in the statement of Dr. Z. H. Evans, "that much of the surgery of fifty years ago, would now not fall much short of malpractice, and what is *now* being perfected may in the future prove to be wanting in many respects. That we are following out surgical laws no surgeon of experience will deny, but will agree that the better we understand these laws, the fewer surgical failures we will have credited to our records. Before we are properly equipped with the necessary knowledge, it will be needful to open many dark cavities into which we must admit the rays of surgical light, and in so doing will experience severe criticisms, especially from the narrow-minded members of the profession.

Dr. Robt. T. Morris, of New York, states that it is not a question whether he be a city physician, or a country surgeon, it depends upon the man and his early opportunities; should we send a man who is bleeding to death from gun-shot wound, or the woman who is flowing to death from intra-uterine hemorrhage, to the city specialist for operation? Not by any means, for the physician who would not give such a case immediate attention, using the best surgical ability that could be instantly secured, would be guilty of criminal neglect. Many of the great operations have been first performed by country surgeons, as for example:

*Chairman's address to the Surgical Section of the Michigan State Medical Society, at the 43rd meeting, in Manistee, June 24 and 25, 1908.

Dr. Walter Bradshear, of Kentucky, was the first in this country to amputate at the hip joint, in 1806.

Henry S. Levert, of Louisiana, became the father of the metallic ligature in 1828. The honor of ligating the internal iliac was awarded Dr. Stephens, of St. Croix, in 1812.

Dr. Ephraim McDowell, in December, 1809, was the first to remove an ovarian tumor (the operation being performed in the little building of his house in Danville, Kentucky). "A back settlement of America—Kentucky—has beaten the mother country, nay, Europe itself, with its boasted surgeons thereof, in the fearful and formidable operation of gastrotomy, with the extractions of the ovaries." What was then said in sarcasm is now the truth. Here in 1812, he removed a stone from the bladder of James K. Polk, afterwards President.

Dr. White, of Hudson, N. Y., in 1827, was the first to tie the common iliac. Dr. Deveric, of Tennessee, in 1806, was the first to remove the lower jaw. Was not this lonely doctor in the mountains of Tennessee the first surgeon in the country to operate successfully for Caesarean section? Dr. Z. H. Evans, of Traverse City, was the first to operate successfully for spina-bifida, in 1888.

I wish to speak of another country surgeon who, Sir John Bell said, "had the brain of an Apollo, the heart of a lion, the eye of an eagle, the hand of a woman." This person was no other than J. Marion Sims, one of the greatest surgeons the world has ever known. His professional fame rests upon his treatment and cure of vesico-vaginal fistula; before his operation it had been deemed incurable, he having invented and applied the silver suture, to secure the result of such an operation. Second, in 1845, of the speculum that bears his name, of which Dr. Emmet says, "From the beginning of time to the present, I

believe that the human race has not been benefited to the same extent and within a like period by the introduction of any surgical instrument." Third: Upon the exposition of the pathology and true method of cure for lock-jaw in infants. Fourth: Upon the established fact that he was the founder and organizer of the Woman's Hospital of the State of New York, the first institution ever dedicated exclusively to the cure of the diseases of women. Fifth: Upon his many valuable contributions to medical literature. Dr. Sims' teachings were appreciated abroad, and recognized by his having conferred upon him the highest decoration of France, Germany, Italy, Belgium, and Portugal.

J. Marion Sims has left a name that the world will not willingly let die; the members of the medical profession throughout the United States may truly exclaim on contemplating his great achievements, in the words of the inscription above the statue of La Place, in the hall of the French Academy of Science, "We were not needed for his glory, he was necessary for ours."

Is there a man before me who would question the right of any one of these gentlemen to open the abdomen, even if they were practicing in the swamps of Louisiana, or the lonely mountains of Tennessee?

Gentlemen, is it not a physician's good conservative judgment that wins? It matters not if he be practicing in New York City, the jungles of Africa, or the swamps of Alabama, this is not only true of medicine and surgery, but will hold good in every line of business. We are all students, some a little in advance of others, but the opportunity is open and the way clear for any one with ability and determination to become as great as any man whose greatness has been known to the world.

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SEPTEMBER

Editorial

The Typhoid Season is Here.—With the coming of the season when typhoid fever is wont to create its greatest havoc, it behooves everyone who is interested in his own health or that of the community to take thought how best to minimize the ravages of this obstinate pest. Time was, and not so very long ago, that we were well content with our knowledge of the danger, direct and indirect, that lay in infected water supplies, and fancied that the man who drank only boiled water and "certified" milk might well consider himself safe. Experience, as usual, has shown us that we knew rather less than we thought we did. It is still true that the greatest damage is done by infected water—the farm well polluted by drainage from the privy vault, and its water not only drunk (and the flavor enjoyed) by everyone on the farm, but used to wash the cans that carry milk (and bacilli) to many dwellers in the distant city; the watercourses, large and small, contaminated by sewage, by the discharges of the laborer with "ambulant typhoid" upon their banks; or of the passengers in boats. These evils still exist, and it is little to our credit that with full knowledge of what they mean and how to correct them, the progress of their amelioration has been

so slow. The wise man still drinks boiled water and investigates with some care the source of his household milk supply, but he can no longer feel that this alone makes him secure. We are indebted to the outbreaks of typhoid fever during our own Spanish war, and the very brilliant and convincing work of the commission which studied them, for the revelation of the very great importance of two other hitherto little considered means of infection—personal contact, and the common fly. Nothing is more striking in the modern literature of epidemiology than the waning of the old ideas of infection by air or sewer gas, and the tracing of all contagion to definite personal contact—direct, or through an intermediate carrier. Of these intermediate carriers, not only for typhoid, but for many other of the grave infections, one of the most important is now generally known to be the ubiquitous housefly. As a mere disturber of our comfort during the warm months, this insect is bad enough; but viewed as a distributor of tuberculosis, the exanthemata, typhoid, etc., he becomes a grave menace, to be tolerated only so far as he cannot be suppressed. We have fallen too much into the habit of regarding him as a necessary evil, to be mitigated, perhaps, by screens, but not to be eradicated; and it is time that every sanitarian, physician or intelligent layman should know that the house fly, like the disease-bearing mosquitoes, breeds only under certain conditions, and that it is wholly feasible that these conditions should not be allowed to exist. Efforts to this end are being made by various health boards and other organizations devoted to public sanitation, and we select for quotation as especially pertinent some extracts from the circular issued by the Merchants' Association's Committee on Protection of the Waters of New York:

"Don't forget if you see flies, their

breeding place is near by. It may be behind the door, under the table or in the cuspidor.

If there is no dirt and filth there will be no flies. All refuse which tends in any way to fermentation, such as bedding, straw, paper waste, and vegetable matter, should be disposed of or covered with lime or kerosene oil.

Keep all receptacles for garbage carefully covered, and the cans cleaned or sprinkled with oil or lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime, oil, or other cheap preparation.

Do not allow decaying material of any sort to accumulate on or near your premises.

Screen all food exposed for sale.

Screen all windows and doors, especially the kitchen and dining room.

Burn pyrethrum powder in the house to kill the flies.

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.

If there is a nuisance in the neighborhood, write at once to the Health Department."

These things are all practical and important, and many of them are almost universally neglected.

There has been during recent years a very gratifying growth in the sense of responsibility on the part of our profession for the education of the laity regarding the prophylaxis of disease; but in the matter of typhoid fever we still have much to do. Municipal and state boards have accomplished a good deal toward preventing or remedying contamination of public water supplies, often in the face of obstinate opposition due to ignorance or selfishness, and a notable movement in our own region is that looking to the improvement of conditions upon the great lakes. Public

authorities cannot, however, and should not be expected to do the whole work, especially in the rural districts. The private practitioner has his own part to play, and in these enlightened days he can hardly be said to be performing his whole duty to the families he visits or to the community at large if he does not inform himself and his patients regarding possible sources of infection before, not after, the outbreak of a preventable disease. The town or village well polluted by drainage from privy vaults or streets, is almost as common now as twenty years ago, and has no excuse for existence. The fly is a universal pest, and always a potential source of danger, which can and must be removed. It is a part of our duty to inform ourselves on matters of this nature, and give the public so far as possible the benefit of our knowledge.



The improvement of the standards of medical education has been one of the constant endeavors of the American Medical Association since its foundation. In fact, the Association is the direct outgrowth of a convention called in 1847, for the purpose of discussing plans for improvement in the education of the profession. The association has not been content to simply pass resolutions favoring the higher standards, but has had committees at work actively engaged in studying the problems of the medical school and successfully devising plans for the betterment of medical training.

The problem of medical education in America is somewhat different from that in any other country, for many of our schools have been organized privately and are maintained for profit. The talent, the energy, and the money which should be concentrated in a few strong schools are dissipated among many. Ohio, for example, has eight medical colleges, where two strong schools with

university affiliations, would be quite sufficient. In the whole country there are 161, eight more than in all the countries of Europe; forty-eight per cent of all the medical colleges of the world. It is impossible for so many schools to be properly equipped, for the supply is far above the demand. It is this multiplicity of schools, many of which cannot afford to supply the higher training, which makes the problem of medical education in America a difficult one.

Much good work, however, has been accomplished. Of the advances thus far achieved, the credit in a not inconsiderable measure, belongs to the American Medical Association. When it began its agitation, many, if not most of the schools, granted diplomas on about six months of actual attendance upon lectures. The rapid advances in the medical sciences demanded much more than this, so that the lengthening of the course of study was in some measure evolutionary, but the demand made by the Association for better standards did much in forcing the colleges to do better work. The more active interest on the part of the national society began with the new era of medicine, when, in 1902, the Association created the standing Committee on Medical Education, which in 1904 became the Council on Medical Education.

The chief aim of this Council is the unification of standards. It works with and through the various state boards of registration and has already been a potent factor in raising requirements. The Council has made a careful study of the whole problem. Formerly the rating of a college was made on its own report. In 1907, however, every school was visited by some one member of the Council and a constant surveillance is kept not only upon the facilities for teaching, but upon the results as well. According to the standing of graduates before state boards, the colleges were divided accord-

ing to their standing into three groups: Group I, in which were placed all the schools above 70, which was taken as a passing mark. Group II, which included the schools marked from 50 to 70. This mark was regarded as not acceptable, but it was considered that the deficiencies in this group might be remedied by such improvements as would bring the standing above 70. Group III, in which the markings were below 50, the facilities entirely inadequate and the work bad.

As a result of this publicity, many schools have lengthened their courses and increased their entrance requirements.

Another phase of the work of this Council is the study of medical registration in the various states. As is well known, there is no uniformity at present. There should be and there will be in time, for the profession, without regard to sect or school, wants it and what a majority of the profession wants it will get.

The following is a summary of the condition of medical education in the United States, as expressed by the Council in the last annual reports. (A portion from each report):

The great advance in the sciences in recent years has created the necessity for a much broader and more thorough education, both preliminary and medical, for the physician equipped to practice modern medicine.

The standards of the medical schools in the United States are very uneven, representing the highest and the lowest types as compared with the standards of England, France and Germany. As a whole, the standard of this country is unsatisfactory and much lower than in those countries.

A modern medical education demands, 1, a four-year high school education; 2, a year of physics, chemistry and biology; 3, two years in well-equipped la-

boratories of anatomy, physiology, pathology and pharmacology; 4, two years in clinical work in dispensaries and hospitals; 5, a year as interne in a hospital.

The expense for the equipment and maintenance of the modern medical school is greater than can be met by fees paid by medical students. Medical schools, therefore, need endowments in order to meet the demands of present day medicine.

In the United States, until recent years, medical education was mostly in the hands of medical colleges conducted as private institutions, while in Europe it is controlled by the universities. Within recent years, however, some of the medical colleges in this country have secured university connection.

There are still, however, a large number of schools which are conducted solely for profit, and profit is only possible where the college fails to provide proper facilities for laboratory and clinical training.

There are 161 medical schools in the United States alone, as many or more than there are in all the countries of Europe combined. Of the 160 medical schools in the United States only about 50 per cent are sufficiently equipped to teach modern medicine, 30 per cent are doing poor work and need to make great improvements, while about 20 per cent are unworthy of recognition.

Eight more colleges have been listed below 50 per cent during the past year. There are now 39 in this "unsatisfactory" group. Thirty-two offer a combined six-year course, leading to A. B. and M. D. degrees. By 1910, fifty-three schools will require one or more years of college work on entrance.

Thirty-four states have established reciprocal relations with four or more other states.

More laws influencing medical education have been secured during the past ten years in this country than in all

previous years, and there is a rapid trend toward uniformity of requirement.



The resignation of Dr. George Dock from the Council is an announcement which will be received by the members of the State Society with sincere regret. As was made public during August, Doctor Dock has accepted the professorship of medicine at Tulane University, and will leave Ann Arbor for New Orleans, October first.

The State Society and the whole Michigan profession lose much by Doctor Dock's removal. For seventeen years he has taught internal medicine at the State University and his influence, during this time, has been great indeed. Year after year succeeding classes have been inspired to do thorough and conscientious work, to love the profession because it is a profession and not a trade, and to seek the higher rewards to which the physician may attain.

During his residence in the state, Professor Dock has been a prominent figure in our medical societies. He has been ever ready to devote his time and his thought to the best interests of the societies; as a member of the council, his advice was most helpful; as chairman of the publication committee his aid was most valuable.

Louisiana gains what Michigan has lost. We wish him God-speed and every success in his new field.



Three new State Journals have made their appearance. The Medical and Chirurgical Faculty of Maryland, which is the state society, has discontinued the publication of its proceedings in the *Maryland Medical Journal*, and established a monthly "*Bulletin*." It is well printed and the choice of Dr. H. O. Reik as editor makes it certain that it will be well edited,

The first number of the *Journal of the Oklahoma State Medical Association* appeared in June. Its editor is the secretary of the association, Dr. E. O. Barker, and the publication office is Guthrie.

There also appeared in June the initial number of the *Journal of the Tennessee State Medical Society*, making the twentieth journal to be published by the state organizations. It is to be noted with considerable pride that not one of these twenty journals has been a failure. Not one of them but has steadily improved since its inception!



Dues for Nineteen Hundred and Eight have not been received from a number of members. A list of the delinquents in each county has been sent to the county secretary in order that it may be checked up with the county books. Individual notices will be mailed this month to all members in arrears, and it is earnestly requested that prompt responses be made. Remember that state dues can only be paid through the county secretary.



Every County Secretary should feel it his duty to attend and take part in the meeting to be held in Detroit on September 30th. Plans for the betterment of the component societies will be discussed. New ideas will be talked about. A permanent organization for yearly meetings will be formed. Dr. George H. Simmons, of Chicago, secretary of the American Medical Association, will be present and tell us what county societies America over are doing. No live organization can afford to allow its secretary to be absent—much less a dead one.

County Secretaries, Attention!

Also all others interested in medical organization. A meeting of the secretaries of the various county societies will be held at the Cadillac Hotel, Detroit, on Wednesday, September 30, 1908, at 2 p. m.

The meeting has been planned for an informal discussion of subjects in which county officers are interested. Topics have been assigned and accepted, but discussions will be expected from all present. The provisional program is as follows:

1. Call to order. Election of temporary chairman and secretary.
2. Medical Organization, What it has, and should mean in Michigan.
3. Program. Scientific Work.—Dr. C. S. Oakman, Chairman Program Committee, Wayne County Society, 1907-'08.

Social Features.—Dr. C. D. Morris, Pontiac. Discussion opened by Dr. H. L. Bower, Greenville, and Dr. L. L. Cahill, Mendon.

4. The Business Side of the Secretary's work.—Dr. A. S. Kimball, Battle Creek. Discussion opened by Dr. A. J. Carlson, Rapid River, and Dr. S. Osborn, Lansing.
5. New Members. and Attendance.—Dr. A. J. Johnson, Adrian.

Discussion opened by Dr. A. C. MacKinnon, Lewiston, and Dr. S. Schultz, Coldwater.

6. What Can Be Accomplished by Hustling.—Dr. C. S. Cope, Ionia. Discussion opened by Dr. A. H. Burleson, Olivet, and Dr. E. D. Kremers, Holland.
7. The Michigan State Medical Society: Why, When, Where, How, and What It Is.—Dr. R. R. Schenck, State Secretary.

8. Business. Permanent Organization. Election of Officers, etc.

A dinner will be served at 6:30 p. m., after which there will be an address by Dr. George H. Simmons, Secretary of the American Medical Association.

Everyone interested in the work of county societies is invited to be present.

Medical Books.

As this is the season when physicians buy most of their books, we cannot do better than to quote the following excellent talk from *The Medical Fortnightly*, by A. L. Benedict, A. M., M. D., of Buffalo, N. Y.:

"Excepting the medical dictionary, 'systems' and compends of all kinds dealing with medicine ambitiously and generally are rather to be avoided. A good rule is to purchase books covering one field of medicine and that one adequately for the needs of the individual. For instance, a cyclopedic work of a dozen or more volumes costs considerable money, and while of relatively enormous extent, it is almost impossible to treat any one subject sufficiently in detail. Sometimes, by the time the last volume is delivered the first are out of date. Thus, in the course of a few years, the entire work, though impressive enough to patients, really is dead stock and must be duplicated in every particular, excepting for slowly changing branches, such as anatomy, medical history, etc.

"The medical library should be familiar to its owner. A book in which the physician cannot readily turn for information and the essentials of which he has not mastered is like an assortment of instruments, bandages, etc., put away where they cannot readily be found. Thus the nucleus of a library should consist in the college text-books—and, as a matter of sentiment, historic reference in later years and even practical utility, it is a good plan never to dispose of such books. Purchases should then be made, according to the resources and needs of each buyer, selecting well recommended books, each of which covers some one definite topic concisely but thoroughly. The viewpoint differs according to the needs and abilities of the practitioner or student. For instance, a work on physiology which is thorough from the standpoint of the practitioner may be crudely elementary from that of the physiologic expert, and, conversely, such a book as would be useful to the latter may be too recondite and contain too great a mass of detail, obscuring general principles, for the use of the practitioner. It was long ago said, 'Of the making of books there is no end.' It is unfortunate that mercenary motives have considerable influence on the publication even of professional literature. From the standpoint of the author, a text-book usually pays if he has a teaching position which will guarantee the annual sale of a

hundred text-books, independently of outside markets. It also pays in the comparatively rare instances in which the author enters an original field which appeals to professional interest generally.

"The result, from the standpoint of the reader, is that medical books are not economic, either in regard to money or time. Of half a dozen works on practice, all the matter that is not common to all might be placed in a small pamphlet and all that has originated with any popular author in a few pages of print. On the writer's shelves are two works on urinary analysis, as nearly alike as two peas in all essentials. What is needed in medical literature is a sort of a loose-leaf system, by which new ideas and discoveries can be conveniently added to a standard basis. To a certain extent this can be achieved by marginal notes and slips of typewritten abstracts; but, after all, the individual reader needs, not so much what he has found as what he has not found that is new and interesting. Perhaps, some day, we shall have a centralized board that will perform this kind of abstracting and digestion of new facts."

Medical Gynecology. By Howard A. Kelly, M. D., LLd., F. R. C. S. Octavo, 662 pages, 163 illustrations, for the most part by Max Broedel and A. Horn; cloth, \$6.00 net. D. Appleton & Co., New York, 1908.

In the preface of his latest book, Kelly pays a graceful tribute to the general practitioner in the following words: "The general practitioner yields up to a little group of investigators that portion of his territory which is most obscure and difficult, in which he has made the least progress; the field is diligently cultivated and a specialty is formed. Then in time the specialist so simplifies the etiology, the diagnosis and the treatment, that he is able to hand back a part at least to the general practitioner, with whom he continues in relations of harmony and sympathy, so that both work conjointly to a common end, namely the extinction of disease and the amelioration of suffering."

The book is designed to supply a basis for working out many of the gynecologic problems encountered by the man doing general work and includes therefore chapters on dilatation and curettage, suture of the perineum and other minor operative procedures. The indications for the major operations are given but none of the technic is included. The work is thus a most valuable addition to the author's "Operative

Gynecology," with which it is uniform in print and binding.

Dr. Kelly has had the aid of various collaborators in the preparation of the different chapters.

The book opens with sections on the methods of making examinations and diagnoses. The second chapter on the "Hygiene of Infancy and Girlhood," by Drs. Welsh and Sherwood, is one of the most important. The section on dysmenorrhea explodes some of the time honored and widely held ideas about the importance of ante flexion, cervical erosion and endometritis. Chapter VII on "Uterine Hemorrhage" is an excellent one. There are sections on headache, constipation, obesity and constipation. The chapter on "Backache" will be particularly welcomed by the profession, for it is an ever present complaint about which too little has been written. Considerable space is devoted to the teachings of Goldthwaite regarding the role of the sacro-iliac joints in the production of backache. Syphilis receives due attention in a chapter contributed by Prince Morrow. Important chapters are those on abortion and cystitis, the former contributed by Ill. A splendid section on "Functional Nervous Disorders Met With by the Gynecologist," from the pen of Barker, will be much appreciated.

From this brief synopsis of some of the chapters it will be seen that the book is wide in scope, much wider than the title indicates. In one sense it is the most important work which the gifted author has written, for he has given us nothing which will prove more generally useful. The work is to be recommended as the most practical and at the same time scientific book on the subject which has yet appeared.

The illustrations are by Broedel and Horn, whose work is recognized as the best in America.

Diagnosis and Treatment of Diseases of Woman. By Harry Sturgeon Crossen, M. D., Clinical Professor of Gynecology, Washington University; Gynecologist to the Washington University Hospital and Chief of the Gynecological Clinic. 700 illustrations. Octavo. 799 pages. Price, cloth, \$6.00. C. V. Mosby Medical Book and Publishing Co., St. Louis, 1907.

This volume has a somewhat different scope from the usual book on gynecology and has been worked out on somewhat different lines. The author has little to say, except indirectly, about etiology, pathology or major operative treatment, confining himself as is indicated by the title, to diagnosis and treatment.

The first two chapters are the best in the

book. The first covers methods of examination and the second diagnosis. They comprise over 300 pages and are illustrated by 440 cuts. Many of the cuts are original and are reproduced from photographs taken in the author's clinic. Other chapters cover methods of treatment, where much space is given to tampons and pessaries; diseases of the external organs and vagina; lacerations and fistulae; diseases of uterus; displacements and non-malignant tumors of uterus; carcinoma; pelvic inflammation; diseases of tubes; diseases of ovaries; malformations.

The proof reading has been poorly done. Some of the cuts could be greatly improved and the printing is not first class. It is to be hoped that a second edition will be more carefully prepared in regard to these points, for the author has some excellent material and knows how to present it in a logical and forceful manner. Many little details have been brought out, especially in the first half of the book, in just the manner to make the book an excellent one for the physician who sees and treats gynecological affections.

What the book lacks in scientific value it perhaps makes up in practical interest, and as a practical guide on diagnosis it is to be recommended.

Syphilis: A Treatise for Practitioners. By Edward L. Keyes, Jr., A. B., M. D., Ph. D., Lecturer on Surgery, Cornell University Medical School. Pp. 577, 69 illustrations, 7 in colors. Price, \$5.00 net. D. Appleton & Co., New York, 1908.

The author of this book is the son of Dr. Edward L. Keyes, who with Van Buren wrote the well known book on genito-urinary diseases. This new work has for its basis the records of 2,500 cases, seen during the past 40 years by Van Buren, E. L. Keyes, Sr., and the author. The disease as seen in the middle and upper classes is depicted, rather than that seen in dispensary work.

A few of the points made are: the spirocheta pallida is the cause of syphilis, but much remains to be learned concerning it. Individual prophylaxis is nearly futile. The disease can not be ameliorated by cutting out the initial lesion. The danger of marital infection is very great, the chances being 12 to 1 during the first year, 5 to 2 in the second year and 1 to 4 in the third year. Marriage can be allowed only after 5 years, during the last two years of which period there have been no symptoms and no treatment. Tobacco must be avoided in the secondary stage. The

treatment is hygienic, tonic and specific. The internal use of mercury, rather than inunctions and injections is favored. If the patient continues under treatment the prognosis is good. Treatment should not be begun until the absolute diagnosis is made.

The various manifestations of the disease are treated of in separate chapters, and every phase is presented. The author's style is forcible and concise.

The illustrations are good; the press work excellent. It is a satisfactory volume and altogether the best monograph on syphilis which has yet appeared in English.

Suggestive Therapeutics, Applied Hypnotism, Psychic Science. By Henry S. Munro, Americus, Ga. Pp. 353, cloth, \$3.00. C. V. Mosby Medical Book and Publishing Co., St. Louis, 1907.

The author of this book is quite widely known through the lectures and demonstrations which he has given in various parts of the country. The subject is one which interests many and many will enjoy reading what Munro has to say on the subject. Few will agree with him in many of his statements, yet there is food for thought in many of the pages.

The liberal use of bold face type has made the reading very difficult, although evidently intended to be an aid.

Reference and Dose Book. By C. Henri Leonard, A. M., M. D., Emeritus Professor of Gynecology in the Detroit College of Medicine. New and enlarged edition; 40th thousand. Cloth, limp sides, round corners, thin paper, 16mo., 145 pages; price, 75 cents. The Illustrated Medical Journal Company, Publishers, Detroit, Mich.

This is a handy little compend of doses, and contains nearly 4,000 references. The U. S. dispensatory has been followed for medium and maximum doses. The common name is given in small type, after the drug name and dose.

Numerous tables are appended, including incompatibles, obstetric information, a fee bill (New Jersey Medical Society), pronunciation of medical proper names and a therapeutic table.

This new edition is printed on thin paper and is but a quarter of an inch in thickness.

Laboratory Guide for the Modeling of the Human Bones in Clay. By Vilray Papin Blair, A. M., M. D., Associate Professor of Anatomy, Medical Department, Washington University,

1906. Published by the Co-operative Association of the Medical Department of the Washington University, St. Louis.

This little manual gives very good directions for the modeling of bones in clay. In several medical schools osteology is taught in this way, and this guide should be an excellent aid to the student.

The Blues: Its Cause and Cure. By Albert Abrams, A. M., M. D. Quarto, pp. 287, illustrated. Cloth, \$1.50. E. B. Treat & Co., New York, 1908.

The preface to the third edition of this little book contains some remarkable utterances and tells the reader what he may expect in the succeeding pages of the volume. Here the author states that after an effectual massage of the liver amelioration of the symptoms of auto-intoxication and splanchnic neurasthenia occurs together with a favorable change in the consistency of the stool. Then too the appearance of an increased amount of indican in the urine after such manipulation is further evidence of the value of such a massage!

The symptoms and the cause of neurasthenia are well described. The author has had a long and varied experience with such cases and presents the subject in a lucid manner. Exception might be taken by physicians endowed with less imaginative minds, and with thorough scientific training, to the explanation of the phenomena of the symptoms of neurasthenia. However that may be, it is certain that the treatment employed by Abrams and by others would not differ much, although the explanation of the results would have a different foundation.

This book has been widely recommended to the laity by certain "health food specialists," and by some physicians who desired to impress their patients with the manner in which they would respond to treatment for this condition. Hence the necessity of repeated editions. It is safe to say that it will not enlighten the practitioner who seeks help in the treatment of troublesome cases of neurasthenia.

The Mellin's Food Method of Percentage Feeding. Pp. 179, cloth. By the Company, Boston, 1908.

This book consists of a series of tables, made from original analyses, together with formulae corresponding to practically every combination of fat, proteid and carbohydrate. There is every

reason to believe that the work is well done and therefore, the tables are very valuable for easy reference.

International Clinics. 18th series, Vol. II. Pp. 304, illustrated. J. B. Lippincott Company, Philadelphia, 1908.

This number contains 24 monographs on treatment, general medicine, surgery, gynecology, ophthalmology, dermatology, orthopedics, pediatrics and pathology.

County Society News

Calhoun.

The Battle Creek Medical Club held its last meeting for the year 1907-8, at Nichols Hospital, June 22, and elected officers as follows: Pres., A. F. Kingsley; Vice-Pres., R. M. Gubbins; Sec.-Treas., M. A. Mortensen.

During the past year which has been the second of post-graduate work in Battle Creek, we have held forty-two meetings, have followed the course outlined by the American Medical Association, and have had an average attendance of over fifteen at each meeting,—over twice the average of the first year.

Our papers have been uniformly good and well discussed, and we consider ourselves fortunate in that of the forty-two papers, we have been disappointed only once by the author not being present. That evening various ones of those present discussed different parts of the program as outlined, and we went away feeling that we had had a very profitable evening, and had lost no time due to the absence of the lecturer. The interest of the members has kept up well throughout the whole course, and all have expressed themselves as pleased with the work.

In conjunction with the post-graduate work we have had several clinical cases presented to us, of which six were of more than passing interest:

Case I—Lymphatic Leukemia—Presented by Drs. W. H. and Wilfrid Haughey. A man of sixty-two years, with marked enlargement of all lymphatic glands, liver and spleen. He has been ailing for about a year, complaining of "nose-bleed" at first, then various gastrointestinal symptoms, together with enlargement of the glands and progressive weakness. His leucocytes were 68,000 at first, but under treatment were reduced

to about 18,000. The small lymphocytes have been from 70% to 80%, and the large lymphocytes about 10%. This case was reported at the annual meeting of the Michigan State Medical Society, and will be published later.

Case II—Knee for Diagnosis—Presented by Dr. W. H. Haughey. A young man of about twenty, gave no history of injury, but complained that his knee "went out" occasionally while at his work, and he had to manipulate the leg for a few minutes to get it "in," when he was all right again. The knee had a considerable lateral motion, the ligaments seemed to be somewhat relaxed, and the catch, or "going out" as he called it, came on suddenly. There was a question if it might not be dislocated, or have a loose semi-lunar cartilage.

Case III—Tetany—Presented by Drs. W. H. and Wilfrid Haughey. A boy six months old, well developed, was presented with the following history. His home was in a distant city, and about two months previously he had some spasms or convulsions which were thought at the time to be digestive, but when the case came to Drs. Haughey they thought it more serious and Dr. Wilfrid Haughey went to see the baby. From the general appearance of the child, of its spasms, and from the opisthotonus present, he diagnosed spinal meningitis. About six weeks later Dr. W. H. Haughey saw the baby and confirmed the diagnosis, but found a complication in the peculiar contractures of the hands and feet. The child was brought to Battle Creek and presented at a meeting of the Medical Club for further diagnosis. The consensus of opinion at the club was that the child had tetany, and some thought it was probably of intestinal origin, but Drs. Haughey believed it to be meningal. The baby died about a month later without having improved at any time, the contractures of the hands and feet having persisted to the last. Recently Babonneix reported to the Paris Pediatric Society two cases of meningitis simulating tetany, and said "tetany should never be diagnosed until spinal puncture has given negative and electrical tests positive findings."

Case IV—Paralysis of Muscles of the Shoulder—Presented by Dr. T. E. Sands for diagnosis. A young man about twenty-five, a painter, gave the history of having fallen from a step-ladder about six months previously. He got up and returned to his painting for the rest of the day. In two or three days he was taken with "typhoid

fever" which a doctor in his home town "aborted" in about ten days. Soon he began to lose the use of his left shoulder. He applied to Dr. Sands for treatment about two weeks before his presentation at clinic. Upon examination we found that all the bony parts of the shoulder could be easily outlined. The head of the humerus was more prominent anteriorly than the other, and seemed to be resting on the anterior edge of the glenoid fossa. The external attachment of the clavicle was very loose and movable. There was also paralysis with wasting of several muscles: the pectoralis, major and minor, the teres minor, the deltoid and the supra- and infraspinatus. He could not raise his arm, but if the elbow was fixed he could use his forearm. The nerves supplying the paralysed muscles are the suprascapular to the supra- and infraspinatus muscles. This nerve sends a twig to the shoulder joint, and also passes through the suprascapular notch. Might it not have been enclosed in a callos? The circumflex nerve supplies the deltoid and teres minor. This nerve passes around the humerus just beneath the glenoid fossa, and also supplies the shoulder joint. This nerve as well as the suprascapular is often injured by falls, blows, etc., on the shoulder, as also by fractures and dislocations. It could be injured by pressure of the head of the humerus, or by a rim fracture of the glenoid fossa. The external anterior thoracic passes through the costo-coracoid membrane to supply the pectoralis major. The inner anterior thoracic follows essentially the same course and supplies the pectoralis minor, from which it passes to the major. When passive motion was made the scapula moved also, as we supposed, from a locking of the tuberosities of the humerus. Some of us thought he had a subluxation of the humerus, a condition described at length by Vale in the *Annals of Surgery* for May, 1908, which came a few days after the patient was presented at clinic. Vale discusses the condition and says the pathology has never been worked out. There has been a considerable academic discussion for and against the idea proposed by Snodden in 1839 when he reported an autopsy on such a case where he found a dislocation of the long head of the biceps. Vale unfortunately was not allowed to operate on his case and confirm or controvert Snodden's theory. Further examination of our case was also denied, for the patient returned to his home, was taken with appendicitis and died. Thus another chance to prove or disprove an

interesting question was lost.

Case V—*Filaria Sanguinis Hominis*—Samples of blood demonstrated by Drs. A. W. Nelson, and C. E. Stewart. The patient, a negro, but recently "was running wild in the woods of Africa." He is now doing light work, enough to earn his living. The filaria was beautifully shown in its active condition.

Case VI—Disseminated Sclerosis—Presented by Dr. W. H. Riley. Patient is a man of about forty-five. Three years ago he had a severe attack of la grippe, and since that time has been treated at various places for various obscure conditions. He is very "nervous," his hands tremble, and he is hardly able to write his name, but when he does it is a characteristic scrawl. He cannot stand alone, and makes all movements with an extreme incoordination. He speaks with a scanning rhythm.

WILFRID HAUGHEY, Retiring President.

Houghton.

The August meeting of the Houghton County Medical Society was held at the Arlington Hotel in Calumet. It was the largest meeting of medical men held in Houghton county in a very long time. This condition was probably due to the fact that they wanted to do honor to Dr. A. I. Lawbaugh, of Tamarack, who had just been elected president of the Michigan State Medical Society. There were twenty doctors from Calumet and ten from Portage Lake at the meeting.

The actual business of the meeting was to hear a paper by Dr. Abrams on "Asepsis in Obstetrics." This was a retrospective paper dealing with old surgical methods in childbirth. Drs. Simonson and Scallon lead the discussion on the paper and discoursed on the more modern methods.

Following the business meeting Dr. Scott, president of the society, took occasion to advise the members of the honor which had been paid the society in the selection of Dr. Lawbaugh to head the state society. He expressed the appreciation of the society for the honor and was vigorously applauded. Dr. Lawbaugh responded to the president's address and then the meeting resolved itself into an informal reception for the veteran physician who had just been so signally honored.

Dr. R. B. Harkness, of Houghton, and Dr. W. H. Matchette, of Hancock, the committee ap-

pointed to draft resolutions concerning contract practice, presented the following, which will receive the attention of the members of the society at the next monthly meeting:

WHEREAS, It is the belief of this society that practicing for Benevolent and Insurance Societies by any members of the profession for a compensation which is manifestly unfair and absurdly small, is inimicable to the best interests of the whole profession;

Be it resolved, That after January 1, 1909, all members of this society refrain from such practice where the monthly stipend is less than \$1.00 for married men and \$.50 for single men.

Be it further resolved, That this society use every honorable means whereby all members of the profession will become members of this society, in order to advance interest and harmony, and uphold the dignity of our profession in Houghton County."

W. D. WHITTEN, Sec'y.

Kent.

The Work of the Milk Commission.—A few years ago the Walker-Gordon Company withdrew from Grand Rapids. Since then the city has been without a dairy where certified milk could be obtained. This matter was taken up by our Medical Society during the next winter and a Milk Commission was appointed which was empowered to obtain certified milk for this city. This Commission after a considerable amount of correspondence obtained a form of contract that was to be made with various dairymen and upon the fulfilling of this contract the Milk Commission furnished these dairymen with the Kent County Medical Society's Certification Label. This contract embodies too many articles to permit our giving it in full, but, in brief, it prescribes the care of the cattle, method of milking, stables, milk houses, handling of the milk, bacteriological and veterinary examinations, etc. The Commission, after a number of interviews with the various leading dairymen of this city, finally made a contract with one of them. In order to furnish the milk and handle it as prescribed in the contract it was necessary for this dairyman to practically rebuild his whole plant. This was done and the following is a brief description of his stables and milk house:

The dairy barn consists of an addition to the regular barn of 28x44 ft., with eight foot posts,

no loft, four windows, 3x5 ft., on both sides, and two of the same size on the third side. Fifteen feet of the north end is partitioned off for a milking room, tightly sealed and white washed; it has a cement floor with gutter and trap leading to the sewer. It is equipped with the King system of ventilation.

The stable proper has two rows of stalls facing each other, all with cement floors. The barn is sided with 8-inch drop siding and sealed inside with ¾-inch matched boards and paper. The milk house and adjacent supply and boiler rooms stand about 100 feet from the barn. They are built of cement blocks and have a cement floor with sewer connection. The boiler room is equipped with an Ideal boiler. The milk room contains a Star cooler, galvanized iron tank, part of which is used as a steam chest. The supply room adjacent contains apparatus for bacterial counts, supplies for the milk pails, caps, bottles, ice-box, etc.

All apparatus, including pans, strainers, absorbent cotton, bottles, pails, etc., about the milk room are thoroughly sterilized each day by being exposed from one-half to three-quarters of an hour to live steam.

The herd at present consists of nineteen cows, in which the Jersey blood prevails. The effort is made to keep the buildings and cows absolutely clean. To make doubly sure of this the cows are carefully groomed, then wiped with dampened cloths. The milk room is thoroughly sprayed with water and the cows are led into it in lots of four, carefully sprayed with water, given a dampened grain ration and milked. Great care is taken that the operators wear clean clothes and have thoroughly cleaned hands. Before commencing to milk, the operator oils his hands with sterile vaseline, wipes the udder with the same for the purpose of preventing particles of the epidermis and hairs from dropping into the pails. The Gurler pail is used. The milk pail is never opened in the milk room or by the operators of the milking room. The milk is taken in the Gurler pail to the milk house, which has previously been sprayed; here an attendant receives the milk at the door, wipes the pail with a sterile cloth, and empties it in a sterile pan that is covered with a sterile cloth. When four cows' milk has been emptied, the attendant commences to bottle. He bottles and caps it warm and immediately immerses it in ice water and keeps it there until it is packed in ice and in the wagon for the delivery.

The bacteriological count for the month of July, made by the Commission's bacteriologist, is as follows:

- Count 1—Bacteria per c. c., 10000.
- Count 2—Bacteria per c. c., 1100.
- Count 3—Bacteria per c. c., 3500.
- Count 4—Bacteria per c. c., 4800.
- Count 5—Bacteria per c. c., 1200.
- Count 6—Bacteria per c. c., 2800.

It is interesting to note that in connection with this count, this dairyman who used more than ordinary care in the handling of his milk, had in the time previous to his commencing the above described technic a bacteriological count of 59,000 to 63,000 per c. c. The bacteriological examination is made bi-weekly by the Commission's bacteriologists who call at a time unknown to the dairyman. The cows are subjected to an examination once a month by the Commission's veterinary surgeon. The tuberculin test is made once a year and oftener if necessary. This dairyman sent one of his sons to Lansing, where he took a special course in the Agricultural College in this line. During the recent hot weather, a bottle of this certified milk was kept off ice for a period of three days and was still found to be sweet at the end of that time.

This certified milk has now been furnished for six weeks, the first day's sale was four quarts, while at the end of six weeks the daily sale is forty quarts. The price per quart is ten cents. In closing I might say that the demand is greater than the supply. However, the dairy is being enlarged as rapidly as possible and by another season the supply will be ample.

F. C. WARSHUIS, *Sec'y.*

O. M., C. O., R. O.

The regular meeting of the O. M., C. O., R. O. County Medical Society, held in Grayling, August 19, 1908, marked a point in its history long to be remembered.

The good fellowship and kindly feeling manifest on every hand, the sincere and ardent manner in which every point of work was taken up was looked upon with pride and satisfaction by those who have worked so persistently and energetically for this society's maintenance and advancement.

The task of organizing and maintaining a medical society where physicians are so far apart

and the jurisdiction covering so large a territory has been no small task and at times the gathering clouds of defeat have taken on a threatening form, menacing the society's prosperity, if not its existence. But today through the ardent work of its officials and active members it is safely sailing on the high seas of prosperity, its meetings are looked forward to with the keenest interest both from social and scientific standpoints.

The meeting of August 19, held at Grayling, was full of interest from start to finish. The afternoon was spent in social enjoyment, commencing with an automobile trip to Portage Lake, where the society was entertained by Messrs. Hal Davis and Frank Powell, who gave the visitors a cruise around the lake in their large yacht. The trip was thoroughly enjoyed by every one and furnished many incidents of pleasure and excitement.

Returning to Grayling in the evening, an excellent dinner was served, to which each and every one present did ample justice.

At 7:30 the society met in Dr. Insley's office where Dr. Angus McLean, of Detroit, held a clinic, which was exceedingly interesting and instructive, after which the society adjourned to the club rooms, where the regular routine of business was taken up and disposed of. Dr. McLean then addressed the society on that very important subject, "Gall Stones and Enlarged Pancreas." Dr. McLean entered into a lengthy discussion of its pathological conditions, its differential diagnosis relative to other pathological conditions of the hepatic system, illustrating by various charts and drawings the various conditions which this dread malady assumes; to a nicety which can only be appreciated and comprehended, by being seen and heard. After the close of the meeting the society was entertained at the home of Dr. and Mrs. Insley, where a social hour was spent and an elegant luncheon served, which brought to a close one of the most successful and instructive meetings in the history of this society.

C. C. CURNALIA.

News

President A. I. Lawbaugh of Calumet spent three weeks on the St. Lawrence River during August.

The 34th annual meeting of the Mississippi Valley Medical Association will be held in Louisville, Ky., October 13, 14, 15, 1908, under the presidency of Dr. Arthur R. Elliott, of Chicago.

The address in medicine will be delivered by Dr. George Dock, professor of medicine in Tulane University, New Orleans; and the address in surgery by Dr. Arthur Dean Bevan, professor of surgery in Rush Medical College, Chicago. The mere mention of these names is enough of a warrant that this feature of the programme will be in every way first class.

The local committee of arrangements in Louisville has selected the Seebach Hotel as headquarters, the general sessions and the section meetings being held in the hotel's large auditoriums.

One of the features of the entertainment projected is a smoker in the famous Rathskeller of the hotel—the finest of its kind.

The McDowell button, so much admired at the 1897 meeting in Louisville, will be reproduced in bronze for this meeting.

The health plank in the Republican national platform reads as follows: "Public Health.—We commend the efforts designed to secure greater efficiency in the national public health agencies, and favor such legislation as will effect this purpose."

The Democratic plank: "We advocate the organization of all existing national public health agencies into a national bureau of public health with such power over sanitary conditions connected with factories, mines, tenements, child labor and other such subjects as are properly within the jurisdiction of the federal government and do not interfere with the power of the states controlling public health agencies.

There are only eleven honorary members of the American Medical Association. The list with the year elected, is as follows: Prof. O. Haab, Zurich, Switzerland, elected 1902; Prof. A. Maitland Ramsay, Glasgow, Scotland, 1904; Prof. A. Logan Turner, Edinburgh, Scotland, 1904; Prof. J. Hirschberg, Berlin, 1905; Prof. A. von Rossthorn, Heidelberg, Germany, 1906; Prof. F. Trendelenburg, Leipsic, Germany, 1906; Prof. L. Kilian, Freiburg, Germany, 1907; Prof. Carl Hess, Wurzburg, Germany, 1907; Prof. Edward F. Schafer, Edinburgh, Scotland, 1908; Prof. August Martin, Berlin, Germany, 1908, and Prof. E. Treacher Collins, London, 1908,

Several recent graduates of the University of Michigan have accepted positions with the mining companies in the Northern Peninsula. Drs. E. W. Dales and J. D. McKinnon are with the Calumet and Hecla; Dr. G. A. Bulson is with the Copper Range Consolidated, as is Dr. W. W. Pascoe; Dr. C. E. McKinnis is with Dr. E. T. Abrams at Dollar Bay.

Houghton County Medical Society has 60 members, the largest number in its history.

The following are new members of the American Medical Association for the month of July: Michigan—B. L. Bryant, Detroit; A. E. Greene, Leslie; Christian Iverson, Kalamazoo; W. J. Marks, Jackson; J. C. Maxwell, Paw Paw; C. W. Merritt, St. Joseph; W. F. Morse, Saginaw; Anna Odell, Detroit; B. W. Pasternacki, Detroit; J. H. Sanderson, Detroit; Jos. Schulte, Detroit; J. D. Stewart, Hartford; R. S. Taylor, Detroit.

A new monthly bulletin has been inaugurated by the American School Hygiene Association. It is called "School Hygiene" and is published at 48 Hereford street, Boston.

During July typhoid was reported to the State Board of Health as being present in 68 localities, being 19 localities more than in June. The disease was somewhat less prevalent than in July of former years.

Statistics, compiled in past years, relative to the connection between the height of the water in wells and the prevalence of typhoid fever show that a considerable increase in the prevalence of typhoid fever may be expected to follow a period in which the ground water is unusually low, and, for this reason, a considerable increase over the usual prevalence of typhoid fever may be expected to follow the recent excessively dry period which was quite general throughout the state. Where the water supplies are obtained from shallow wells, or from some other source which is not above suspicion, the boiling of the drinking water during the next three or four months would be a wise precaution and should be recommended by local health officials. Attention should also be directed to the danger of putting ice, which is obtained from streams, lakes and rivers, into articles of food and drink, and to the necessity for screening articles of food and drink against the common house fly, together with the use of a liberal amount of quicklime, chloride of lime, or solution of copperas (sulphate of iron).—Public Health, July, 1908.

In the Alabama legislature there is an enactment pending requiring all applicants for marriage licenses to present certificates from reputable physicians as to their physical condition.

Dr. R. R. Smith, of Grand Rapids, has returned from Europe.

Dr. C. B. Burr, chairman of the Council, is still absent in Europe.

Dr. Leroy W. Childs, of Painsdale, for the past year on the medical staff of the Copper Range Consolidated Mining Company, left August 1st, to locate in Atlanta, Ga., where he will be connected with one of the medical schools of the city.

Dr. H. J. Jones, formerly assistant at Baltic, will succeed Dr. Childs at Painsdale.

Dr. John H. Carstens, Detroit, announces his candidacy for the mayoralty of the city on the basis of direct appeal to the people. His candidacy will be free from promises, pledges and politicians.

Dr. T. M. Koon, Grand Rapids, has returned from a year spent in Europe.

Dr. D. Emmet Welsh is the new health officer of Grand Rapids.

The new officers of the Wayne County Medical Society were installed at the second meeting in September. They are: President, Dr. W. P. Manton; vice-president, Dr. A. H. Bigg; secretary-treasurer, Dr. G. H. McFall.

Dr. H. Grube, of Coldwater, has been appointed chief surgeon of Soldiers' Home at Grand Rapids.

Recent additions to the state membership are: H. H. Runonavarro, Calumet; W. J. Hanna, Kingston; T. D. Givan, Three Rivers; F. A. Pratt, Centerville; W. E. Doran, Colon; J. E. Elliott, Detroit.

Marriages

Murray D. Cowie, M. D., Ann Arbor, to Anna Marion Cook, M. D., of Evansville, Indiana, June 13.

John C. Dodds, M. D., to Miss Jean B. Gretter, both of Detroit, July 8, 1908.

Mat K. Guinan, M. D., Detroit, to Miss Irene Callow, of Pontiac, recently.

Ernest M. Ling, M. D., Laporte, to Miss Ella Maude Moon, Detroit, June 30.

Deaths

Albert Hartsuff, M. D., a brigadier-general of the United States Army, retired, died suddenly from heart disease, at his home in Detroit, June 22, aged 71.

Abel M. Crawford, M. D., one of the oldest physicians in Jackson, died recently at his home, from the result of a fractured arm, aged 80.

John Hamilton, M. D., of Pompeii, one of the oldest physicians in southern Gratiot county, died in July, after an illness of ten days, aged 77.

Bernard Hesse, M. D., for nearly fifty years a respected German practitioner of Saginaw, died suddenly, July 12, in his office, aged 74.

Dr. Simeon Belknap, of Niles, died suddenly of heart disease on July 14, aged 71 years. He was for many years United States pension examiner and at the time of his death was a surgeon for the Big Four and Michigan Central railroads. He was a vice-president of the State Society in 1888.

THE INTERNATIONAL CONGRESS ON TUBERCULOSIS.

The section meetings in connection with the Congress will take place the week beginning September 28th, and the exhibition will continue for the entire three weeks, from September 21 to October 12th.

The program for the week includes two plenary sessions, one on Monday, September 28, at which it is hoped that President Roosevelt will preside; and the other (probably) on Saturday, October 3. In accepting the presidency of the Congress, President Roosevelt promised that if it were impossible for him to preside at the general sessions he would delegate Secretary Cortelyou to represent him. Each of the seven sections into which the Congress is divided will hold two sessions daily, except on the days on which the plenary sessions will take place. The provisional programs for the sections have been completed and copies may be obtained by writing to the Secretary of the Congress, Dr. John S. Fulton, 714 Colorado Building, Washington, D. C.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Snake Poisoning in the United States.—WILLSON has done a very decided service in collecting the facts concerning the venomous snakes of America.

Classification.—There are only two of the family coluber in this country sufficiently poisonous to be dangerous to man. These are the two species of coral snakes found in the southwest, and fortunately their habits are such that bites from them are of rare occurrence. The true vipers are wholly confined to the old world. Of the pit vipers—so called because of the pit or fossa on the side of the head between the nostril and the eye—we have three genera, of which two, *crotalus* and *sistrurus*, are rattlesnakes, while *ancistrodon* is represented by but two species, the copperhead and the water mocassin. The copperhead is confined to the east and south, and the water mocassin to the south, so that in the north and west we have only the various species of rattlesnake, of which those belonging to the genus *crotalus* are more venomous than the species of *sistrurus*.

The total number of cases of snake bite collected by Willson is 740, of which 440 were found in the literature, the remainder being obtained from various private sources. Of 566 in which the nature of the snake was known, 408 were rattlesnake bites, 97 copperhead, 53 water mocassin, 8 coral snake bites. The figure of 17.1% for copperhead cases is probably too low, as the snake is widely distributed, and its bite usually so little dangerous as not to come to a physician's attention. On the other hand, the rate of 1.4% for coral snake bites is undoubtedly relatively very high.

Space here forbids discussion of the toxins and their relative proportions in the venoms of the different species.

The mortality in Willson's whole series was 10.7%, which he considers to represent very fairly actual conditions. In 624 cases where the species was more or less definitely known, the mortality in rattlesnake bites of all species was 11.7%, while in those known to be from rattlesnakes of the genus *crotalus*, it was 15.7%. From copperhead bites mortality was 5.1%, from water mocassin bites 16.9%, and from coral snakes 75%. Prognosis in general depends on (1) the amount and toxic quality of the venom injected;

(2) the location and character of the injection; (3) the age, sex and resisting power of the patient. The amount of venom injected by snakes of the same species varies with their size, the fulness of the poison gland, and the completeness of the bite. Bites on the head and trunk are much more dangerous than those on the extremities, and those on the upper extremity more dangerous than those on the lower. Fatal results are naturally relatively more frequent in children than in adults. Data regarding sex are not clear, but it seems rational to suppose that the death rate would be lower in males than in females.

Treatment is divided into local and general. Local treatment has for its object the removal of the venom or its destruction in the tissues. Amputation of an extremity or a major portion of it, in view of the low average mortality, would hardly be considered, unless it were definitely known that a fatal dose of venom had been injected. Amputation of a finger or toe would be justified where circumstances rendered prognosis doubtful. Free excision early is recommended when possible; when it is not possible, free dissection. Suction probably removes little venom, but may be of some value. Permanganate is probably the best drug to destroy venom, and should be used as a local injection. When the case is seen early several ligatures may be applied between the bite and the trunk, aiming to cut off all circulation. When edema and swelling are already present, ligatures should not be tight, but merely delay the return of venous blood and lymph. The great danger of infection and gangrene necessitates great care in all surgical procedures. General treatment should encourage elimination and keep up blood pressure. Strychnine and ammonia have been proved to be useless; alcohol worse than useless. Adrenalin theoretically should be of value, and has seemed so in practice. Infusion of physiological salt solution has proved decidedly valuable. The bowels and kidneys should be kept functioning, and water given freely by mouth. Artificial respiration may be of use in *ancistrodon* poisoning, but not in *crotaline* poisoning. There are not now, nor are there likely to be, specific antisera of value in poisoning by these snakes.—*Arch. of Int. Med.*, Vol. 1, p. 516.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

Relation of Weight of the Placenta to That of the Child.—Manton of Detroit has an interesting paper in the Buffalo Medical Journal on this subject. The paper was read before the Wayne County Society last April.

Manton says:

Coming now to the influence of multiparity on the weight of the placenta and child, we find that the weight of the average offspring, regardless of sex, of primiparous mothers is seven pounds, and that of the placenta is eighteen ounces and one-half, a slight diminution in the normal average weight of both.

In the instance of the multiparous mother the converse obtains; the weight of the child is augmented to 7 pounds and $4\frac{3}{8}$ ounces, while the placenta remains at the average weight.

Sex appears to exert some influence as regards the weight of the child, but has little effect upon that of the placenta. Thus the average weight of the male child is 7 pounds 4 ounces, that of the female 7 pounds 1 ounce. The respective placentas weigh 12 2-3 ounces and 18 2-3+ounces.

It is interesting to note that among the 400 cases the largest child, a male, weighed 10 pounds and 8 ounces (placental weight 28 ounces; multiparous mother); the smallest child, a female, 3 pounds (placental weight 16 ounces; mother not stated). The largest placenta weighed 40 ounces (male child, 8 pounds 11 ounces; primiparous mother); the smallest placenta weighed 6 ounces (female child, 6 pounds 12 ounces; primiparous mother).

Conclusions: The figures above presented are interesting on many accounts. They at least indicate that, as a rule, the development of the placenta goes forward with that of the child, and its size may be taken ordinarily as an index to the weight development of the latter. It is further shown that while there may be individual variations in any given number of cases, these will not be sufficiently numerous to greatly influence the normal weight ratio between child and placenta, that is, $6+0.1$.—*Buffalo Medical Journal*, May, 1908.

Hematuria in Pregnancy.—BALLOCH states that the so-called idiopathic hematuria is now ascribed either to vasomotor changes or to chronic nephritis; the latter theory is gaining

ground. Røvsing and Cabot believe that movable kidneys frequently give rise to hemorrhage. The author's case was that of a woman of thirty-one years. In her sixth pregnancy the hematuria again showed and never again disappeared, although varying in intensity, and still persisted when seen seven months after the birth of the child. The feet have been swollen since the first pregnancy; there were no symptoms of renal colic. Physical examination was negative except soreness over the left kidney region. The urine contained blood, but no casts; cystoscopy showed bloody urine escaping from the left ureter. As medical measures had failed, the left kidney was removed. A glomerulo-nephritis and increase of the interstitial connective tissue between the pyramids was found in the small kidney. In a subsequent pregnancy blood again appeared in the urine for a short time. Since then she has been well. This is the author's second case in which pregnancy occurred in patients with one kidney. Probably the increased or faulty metabolism during pregnancy proved too much for the single (nephritic) kidney and therefore hemorrhage recurred. In a similar case Ballock would now perform either decapsulation or nephrotomy, which has been found effective, and thus preserve all the functioning kidney tissue possible.—*Surgery, Gyn. and Ob.*, March, 1908.

Electricity in the Treatment of Cancer.—LEOPOLD recently went to Marseilles to investigate the treatment of cancer by the electric spark, a method advocated by Hart and reported by him at the Electric Congress in Milan in 1906. LEOPOLD says that the written descriptions of the method give very little idea of the technic which Hart has worked out in the course of several years. He regards the fulguration as merely a preliminary or adjuvant to the knife. The improvement realized even in advanced cases is remarkable, relieving the patient of hemorrhage, pains and ichorous discharge for a time at least. Disseminated nodules of recurring mammary carcinoma are fulgurated each for five or ten minutes. This softens the nodules and prepares them for excision, after which he fulgurates for twenty or thirty minutes. The fulguration does not lead to the formation of an eschar; the tissue merely turns brownish and edematous, with free exudation of lymph.—*Zent. f. Gyn.*, June 4, 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. S. OAKMAN, M. D.

The Bacteriology of the Puerperal Uterus.—NICHOLSON and EVANS of Philadelphia tabulate 67 cases in which they made bacterial investigations after parturition. These included 49 cases that were normal obstetrically, 11 cases that were in some way abnormal obstetrically, and 7 cases which showed intercurrent disease, gonorrhea, or sepsis. The puerperium was divided by them into three periods: the first, from delivery to the third day; the second, from fourth to seventh day; the third, from eighth to thirteenth day. Cultures were taken in these three periods, and the authors lay much stress upon the technique, owing to the ease of contamination by the vaginal and cervical fluids; they used a specially devised curved cervical speculum, with a cap, hinged in such a manner that a collecting tube may be introduced into the uterus with absolutely no possibility of being fouled by external secretions. The culture methods employed were stroke plates of agar-agar, glycerin agar, and serum agar; bouillon tubes, litmus milk tubes for anaerobic cultures by Wright's method, and glucose agar. In addition, cover-slip preparations were made, two stained by Loeffler's stain and two by Gram's. They specify that a "normal" obstetrical case, as regarded by them, is one in which there has been no instrumental interference in labor, no introduction of hands into the uterus, no placing of gauze in uterus or vagina, no douches given, no retention of secundines, and no alteration of the lochia.

The authors recapitulate the studies of Doederlein in 1897, of Stolz, and the contemporary study of Little. As to the value of the intra-uterine culture as an aid to diagnosis, they state that it should not be neglected in the routine study of infected cases, where bacteriological work is possible. On the other hand, they do not believe that it is a sure means of diagnosing the presence or absence of infection, on account of the many sources of error and conditions which are not yet understood. Considered together with the studies upon the bacteriology of the blood, they assert that when blood and intra-uterine cultures are negative, a high temperature is due to some intercurrent affection; if the intra-uterine culture is positive, but the blood culture negative, the infection may be considered local; if the intra-uterine culture is negative and the

blood positive, the case may be considered a general infection, in which the endometrium was sterile from the beginning, or has become so after a primary local infection.

From their studies, the authors conclude that the uterine lochia is sterile in normal cases throughout the puerperium; streptococci are never present in the cavity of the uterus without causing symptoms; occasionally non-pathogenic germs may be found in afebrile cases, but probably their detection is due to contamination during extraction of the lochia or during obstetric manipulation; ascendance of the gonococcus is comparatively rare, though its frequent presence below would give reason to expect otherwise; infection of the endometrium is a constant danger in making cultures early in the puerperium; cultural investigations of the lochia are of distinct importance as a subsidiary means of diagnosing septic infections post-partum; in employing this aid to diagnosis, a technique should be adopted which will prevent contamination during removal of the lochia and during transference to culture media.—*American Journal of the Med. Sciences*, August, 1908.

Anatomy and Pathology of the Carotid Gland.—GOMEZ examined fifty cases postmortem as material for his report. The only pathological changes ever described were neoplastic; the increasing frequency of such reports makes it probable that they have often been overlooked or wrongly diagnosed. The etiology is unknown. Tumors of the carotid gland occur with greatest frequency in adolescent and adult stages. They are usually oval, and varying in size up to the size of a goose egg; they are usually hard and elastic, of a reddish gray to gray or brown color; the capsule is fibrous and sends septa into the tumor; vascularity is marked. They are usually adherent to the carotid artery. Histologically they most resemble endothelioma, and the cells are cubical, spindle, triangular, or polyhedral in shape; the connective tissue septa are prone to undergo hyaline degeneration. These tumors are at first benign, but later may grow rapidly, with tendency to adhere closely to surrounding structures. There may be enlargement of neighboring lymph nodes. Recurrence has sometimes occurred after removal.—*American Journal of Medical Sciences*, July, 1908.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Mercuric Bromide in Syphilis.—DALIMIER finds, after several trials, that the best solution for use as an intra-muscular injection in syphilis is:—

R. Hydrarg. Bromidi, gr. viij.
Sodii Bromidi, gr. vj.
Aq. destill. steril., gr 3j.
Misce. Fiat inject.

This injection is painless and effective in action.—*Revue de Therapeutique*.

Tincture of Eucalyptus in Hemorrhage.—A. TODD-WHITE calls attention to the value of this remedy in cases of hemorrhage. He was sent for to see a patient who had a tooth extracted three days before, and had had persistent hemorrhage from the socket. The usual remedies were applied without avail. On the third day tincture of eucalyptus was applied and the hemorrhage almost immediately ceased. The next day the patient's brother cut his foot and the hemorrhage was profuse. Having some of the eucalyptus left he applied it to the wound, and the hemorrhage immediately stopped. Later the author was asked to see a case in which persistent hemorrhage followed the application of a leech to the gum. The usual remedies—alum, tr. ferri perchlon, ice, etc.—were tried unsuccessfully for twelve hours. He applied tincture of eucalyptus, and the hemorrhage ceased within five minutes and did not return. It is most useful on lint after circumcision or other minor operations. He is of opinion that the internal use of calcium chloride combined with the external application of tincture of eucalyptus will stop any form of hemorrhage.—*British Medical Journal*, July, 1908.

The Purgation Properties of Phenolphthalein—BERTHOUMEAU and DAGUIN discuss the usefulness of phenolphthalein as a purgative. It has grown greatly in importance during the past few years and its harmlessness as well as reliability make it valuable in all patients. It augments by direct contact the contractility of the intestine and increases the secretion. A dose of two grs. will purge, whereas half that amount for an adult will act as a laxative without producing abdominal distress. In children in doses according to the age, it acts very satisfactorily and is inoffensive.—*La Presse Medical*, June, 1908.

Some Cases Other Than Obstetrical in which Hypodermatic Injections of Ergot have been of great service.—ROBINSON reports three cases in which he has successfully employed ergot hypodermically. In the first a male aged fifty-six had a severe case of acne rosacea. Two injections brought a marked change, while six given on alternate days cured the condition.

The second, a female aged sixty, weighing about two hundred pounds, had a long standing case of varicose veins. Seven injections on alternate days greatly improved the circulation.

The third case in a nervous individual, addicted to cigarette smoking, was supposed by the author to be suffering from poor circulation. The good effects from injections of ergot were attributed to its effects on the circulatory apparatus.

He sums up the action of ergot as follows: (1) That its direct and specific effect is the contraction of unstriated muscular fiber, or other involuntary tissue. (2) That it does not markedly contract that which is normal in tone; but (3) That it is prompt and striking in such effect in proportion to the recency of occurrence of the atonic state in such fiber. (5) That its widest field of usefulness is its application to the muscular coat, or other contractile tissue, of weak and relaxed blood-vessels. (6) That it there tends to equalize vascular tension; to distribute the blood equably throughout the body; to restore or to promote functional activity of glands and organs generally, and vasomotor centers particularly. (7) That it is useful to restore tone in the unstriated fiber of the walls of the hollow viscera, stomach, bowels, bladder, uterus. (8) That the prevalent, popular notion, existing even in the medical profession, that it is a dangerous drug, and likely to produce ergotism, is unfounded as regards the modern pharmacopial preparations, at least as regards such as he used during the past thirty-four years. (9) That its local action upon the stomach is often offensive, especially if full doses are given; that its absorption from the stomach is uncertain, both as to promptness and degree; and therefore, (10) That its administration should be limited as much as possible to hypodermic injection, which assures immediate effects, admits of exact regulation of dose, and avoids nausea and other ill effects of its administration per os.—*Med. Record*, July 29, 1908.

PEDIATRICS

Conducted by

R. S. ROWLAND, M. D.

Some Advances in Infant Feeding.—LAMB'S criticisms of existing methods and suggestions are of special interest when taken in connection with the article on the same subject by Cooley in the June issue of this Journal.

LAMB believes that the failures have been due largely to the fact that we have been dealing in percentages and not in actual amounts of food (i. e. energy quotients); to false ideas of fat and proteid digestibility; and to too short intervals between feedings. He further remarks that the percentage method is very complicated both for the physician and the mother, and that if our present formulae are followed there is great danger of over-feeding.

The writer offers the following method, which he thinks avoids extremes, is easily carried out, and will be found applicable in most cases: Simple dilution of whole milk with water until it can be digested by the infant, and the addition of carbohydrate to make up the energy quotient to the required number of calories. Starting with a dilution of two parts water and one part milk, increase the proportion of milk until the infant can digest it, aiming to reach one half milk by the middle of the second month. During the second and third month increase the percentage of milk still further, so that by the fourth month two parts milk and one part water are given. Keep on this two-thirds dilution until the eighth month, increasing the amount fed, but not the strength of the mixture. From the eighth month gradually increase the percentage of milk, so that at one year the child takes whole milk.

It is seldom necessary to start with a greater dilution, but it may be advisable in some cases to feed whole milk by the eighth month. The stools and the weight curve are the sign posts to be followed. The carbohydrate to be added is preferably a dextrin-maltose mixture, because it possesses all the good qualities of starch, requires but little digestion and can be given in large amounts without danger.

In the second and third months a small amount of properly prepared starch, in the form of wheat flour, barley or oat meal should be added; this amount to be gradually increased each month so that when the time arrives for the child to

take a mixed diet, its starch digesting power will be developed.

The feedings should be three hours apart during the first three months, and after the fourth month four hours apart. The volume depends upon the weight of the child and should be respectively one-sixth, one-seventh, one-eighth, and one-ninth of the body weight in the four quarters of the first year. It should never exceed 36 to 38 ounces.

During the first three months, the food should have a value of 45 calories per pound of body weight. During the second three months 40 to 45 calories per pound and during the second half year the fuel value should gradually decrease, so that at 12 months it is 32 to 35 calories per pound of body weight.

LAMB draws the following conclusions:

(1) The most important thing in infant feeding is to know the exact amount of food the child receives in 24 hours. The only way to do this is to calculate energy quotients.

(2) The percentage method is uncertain, complicated and unscientific.

(3) Amounts, not percentages, should be fed.

(4) Over-feeding is one of the commonest causes of nutritional disturbances in children and is a distinct clinical entity.

(5) Fat in cow's milk is the element to be feared.

(6) Fat produces constipation, proteids never do.

(7) The curds in the stools are not proteid, but calcium soaps, fatty acids, or fats.

(8) Casein is not difficult to digest, does not produce digestive disturbances and does not undergo putrefactive changes in the alimentary canal.

(9) The new-born infant can digest starch.

(10) Dextrine and starches are the most valuable adjuncts to milk feeding.

(11) The volume of the food should depend upon the weight of the child and should never be over 36 to 38 ounces.

(12) The intervals between feedings should never be less than three hours during the first three months and after three months four hours.

—*Arch. of Pediatrics*, June, 1908.

DERMATOLOGY AND SYPHILIS.

Conducted by

A. P. BIDDLE, M. D.

Nutritive and Neurotic Disturbances of the Hair.—Certain diseased changes in the hair have for some time been recognized as due to the action of grosser parasitic micro-organisms, in other conditions the disturbance in the nutrition of the hair is believed to be caused by the presence of smaller organisms, as cocci, and some have claimed a parasitic form of alopecia areata; in others, the loss of hair is due to pus organisms. But there is a much larger and very important group of disturbances of the hair which are caused by derangement of nutrition and innervation going on within the follicle, which it is well to consider from a broad point of view.

When the sexual functions cease in the female, at the menopause, there is considerable tendency to growth of hair on the face; many observers have also noticed the proneness to superfluous hair on the face of females much earlier in life, in connection with sexual disturbances from ovarian or uterine disease. Furthermore, when there is gross disturbance of the nervous system and mental faculties, as in insanity, there is a tendency to growth of hair on the face of females, as many have testified. All these facts demonstrate that the development of larger hairs from lanugo hairs depends on causes which may at one time or another come into action in the system.

Acquired alopecia seems to be a more or less normal or natural accompaniment of advancing years, with its failure in nutrition and nerve energy.

Premature alopecia, which may occur at any time of life, is known to have a definite causation in certain cases. Thus, after erysipelas and fevers, notably after typhoid, there is often a great shedding of the hair, which regrows more or less quickly and with greater or less vigor, according to the recuperative powers of the system.

The hair follicle is but an involution of the epithelial covering of the skin, penetrating the corium, at the bottom of which the hair papilla rises from the corium, well supplied with nerves and blood vessels which furnish nutriment to the growing hair. The lowest part of the hair is large, soft and succulent, and it is only in the upper portion of the follicle and in the completed hair, as seen externally, that there is any tensile strength. The newly formed, soft and succulent cells in the deepest portion of the hair follicles are gradually changed in character, as the hair is pushed forward. The component cells, which were originally cylindrical and polyhedral in shape, become altered into spindle-shaped, nucleated cells, almost fibers, until, in the com-

pleted hair, they are firmly fused together into a firm, dense structure of considerable strength.

When there has been an agency or condition disturbing the nutrition of the hair, the lower cells fail to undergo the proper transformation just described, and, as they are pushed out by newly forced cells below, the portion of the hair within the follicle separates and the long hair is shed. In the meantime, however, unless there has been too great a derangement of nutritive or nerve elements, the soft and succulent cells are still being produced around the papilla, and are pushed forward; but if they are yet unable to undergo a normal change into the fibrous structure of the complete hair there will be alopecia of greater or less degree. On close inspection we often find open follicles choked with imperfectly developed hair cells, and it only requires a resumption of the proper functions of the follicles to again produce hairs of proper size and length.

In course of time, however, as seen in the senile scalp, there may become a permanent alteration in the follicles, which then become sealed up, and no hair can possibly grow. In the ordinary falling of the hair, therefore, there is not, as the laity suppose, a complete loss of hair, but only a shedding of the external portion, as in animals at certain seasons, while the real root from which new hair may grow remains still in the follicle, ready to reproduce healthy hair, if only the nutritive and neurogenic powers are in proper condition.

All recognize that dermatitis seborrheica is a most fertile cause for the falling of the hair, and in a study of this disease by Dr. Bulkley it was shown to be an important factor in over 63 per cent of cases of alopecia. But it was also shown that, although it was recognized as due to a micro-organism practically omnipresent, dermatitis seborrheica was constantly dependent upon general causes; which lowered the vitality of the tissues and rendered them suitable for the growth of the organism and thus enabled it to interfere with the nutrition of the hair.

Alopecia Areata. The constant observation of a spontaneous disappearance of the trouble, even repeatedly, would also militate against a parasite theory, while its occasional appearance or recurrence after each great nerve strain or shock would support the constitutional theory of the nature of the disease. The very great rebelliousness of alopecia areata to local treatment alone, and its yielding to complete and perfect internal measures, even without local aid, would also indicate a constitutional rather than a local etiology.—BULKLEY and JANEWAY, *Section on Cutaneous Medicine and Surgery*, A. M. A., Chicago, June, 1908.

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THE SURGICAL TREATMENT OF ACUTE OTITIS MEDIA*

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It is not my purpose to endeavor to tell you anything particularly new about this subject, nor anything of which you are not already aware. It is my purpose, however, to impress upon you the necessity of early surgical treatment in such cases of otitis media as need it, and the necessity of an early and thorough examination of the ear affected, in order that the advisability of such treatment may be early determined. It is a well known fact that the vast majority of chronic ear troubles are the results of some nose or throat trouble, causing acute otitis media which has been neglected. A brief review of the anatomy of the parts concerned may be of advantage in refreshing the memory regarding the location and intercommunication of the structures usually affected in this disease.

The middle ear cavity lies at the internal end of the external auditory canal, from which it is separated by the drum membrane. The cavity is flattened transversely. In size it is $\frac{5}{12}$ of an inch, before backward, $\frac{1}{4}$ inch perpendicularly, and $\frac{1}{4}$ inch transversely,

and its walls are composed of unyielding bony structures, with the exception of the outer wall, which is composed of the drum membrane as before mentioned. The cavity is lined with mucous membrane, and contains the hammer, anvil and stirrup, a chain of ossicles lying between the drum membrane and the oval opening in the bony wall of the internal ear, being placed in the order in which they are mentioned from without inwards. The mucous membrane of the middle ear cavity is continuous with the mucous membrane of the nose and throat through the medium of the tympano-pharyngeal tube which extends from the middle ear cavity to the naso-pharynx. This tube is about two inches long, with a diameter of about 2 m.m. at its middle ear orifice, and enlarging to a diameter of about 4 or 5 m.m. at the naso-pharyngeal orifice. Its walls are partly of bone, partly of cartilage and fibrous tissue. The naso-pharyngeal orifice protrudes somewhat from the naso-pharyngeal wall and resembles the expanded end of a trumpet. The bony wall of the middle ear is very thin above the cavity, usually about 1 m. m. in thickness, or less. Above this lies

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the interior of the skull. At the upper and posterior side of the middle ear cavity is an opening varying in size, which leads to the largest mastoid cell, which is called the antrum of the mastoid. This passage is called the "ad-antrum" or the "ad-additis," meaning simply "to the antrum," or "to the attic," corresponding to the end from which it is viewed. That portion of the middle ear cavity into which this passage opens from the antrum is called the attic. Adjoining the mastoid antrum and at times intercommunicating with it, are a large number of other cells, lined with mucous membrane, and making up the spongy tissue of the mastoid bone. The usual beginning of an otitis media is some inflammatory condition of the nose or throat extending to the naso-pharynx, and from there by way of the tympano-pharyngeal tube to the middle ear cavity. The mucous membrane of the tympano-pharyngeal tube is covered with ciliated epithelium, which has a waving movement towards the naso-pharynx. This is the only direction in which the middle ear cavity is normally drained. The tympano-pharyngeal tube is also the only passage by which the middle ear cavity is ventilated and supplied with air pressure so that this pressure may be the same on the inside of the ear as it is on the outside. If for any cause the drainage or free aeration of the middle ear cavity is obstructed, we have one of two things, or both of them, occurring as a consequence. If ventilation is prevented, there is formed a partial vacuum, with increased resistance to external air pressure. If the tube is so obstructed as to prevent free drainage, there will occur accumulation of the mucus in the middle ear cavity. This accumulation being more or less, and of different composition, according to the nature of the conditions causing it, whether or not it be merely an edema with exudation, or a true inflammation with germ infection

and pus. It may be readily seen that any inflammatory condition of the naso-pharynx is very likely to cause inflammation of the lining membrane of the tympano-pharyngeal tube. This inflammation in the tube causes an excess of the mucous flow, and swelling which closes the tube and obstructs the drainage. The position of the tympano-pharyngeal tube is somewhat different at different ages. In the infant the internal opening is about on a level with the opening into the middle ear cavity. As age increases the position of the tube changes gradually, until in the adult the naso-pharyngeal opening is about one-half to three-quarters of an inch lower than the opening in the middle ear cavity. Thus we see that the drainage through this tube from the middle ear cavity in infants and children has not the advantage of promotion by gravity that it has in adults.

The causes of acute otitis media are varied. As this paper has to do with the surgical treatment of the trouble, it is not my purpose to enter extensively into discussions of the etiology. Suffice it to say that any inflammation or infection of the nasopharynx or obstruction of the eustachian tube by adenoids or any other trouble may cause it. The germ of infection mostly found in discharges from the middle ear cavity following an acute otitis media are the pneumococcus, bacillus of influenza, staphylococcus, streptococcus and occasionally others of the generally known bacteria, even including the bacillus coli communis. The bacillus of tuberculosis is also found in some instances. These germs may have gained access to the middle ear cavity through a perforation in the drum membrane. This perforation may occur through external violence or spontaneous ruptures, or through perforation done without antiseptic precaution, or on account of uncleanness of treatment following perforation. Tu-

berculous infection in the middle ear cavity has often been considered primary, and indeed it has been advanced that tuberculous infection of other parts of the body does at times occur as the sequence of primary middle ear infection. Tuberculous infection, however, is not usually accompanied by pain, or the acuteness of other infections. Many times the first evidence of a tuberculous middle ear infection is a perforation of the drum membrane and discharge following. Otitis media, following scarlet fever, measles, typhoid and other fevers often appear to be not caused by extension of the infection from the throat through the tympano-pharyngeal tube; it appears to be at times metastatic, or even simultaneous with the eruption in throat.

The first symptom of an acute otitis media is usually pain. In some cases where the condition appears to be caused by merely an excessive formation of mucus in the middle ear cavity, the first symptom complained of by the patient is a crackling sound in the ear and deafness. In the vast majority of cases, however, pain is the main symptom, and in the severer types the pain is very excruciating and may early become so. The character of the pain is said to resemble that of orchitis. About the only affections this needs to be differentiated from are neuralgia and myringitis. The fixed location of the pain and the appearance of the ear drum usually make a differentiation clear. In neuralgia the pain may usually be traced to other parts of the head, or side of the face, along the course of a nerve. Neuralgic pains are also usually more or less migratory. In inflammation of the ear drum, an inspection of the membrane will usually show a streak of red along the line of attachment of the handle of the malleus. Later appear a few streaks of red throughout the drum membrane, and a red circle about it, close to its at-

tachment to the external auditory canal. There is no bulging of the drum membrane nor any displacement of the landmarks. Deafness is not a prominent symptom in myringitis. The patient complains usually of the contrary, that is that he can not bear the loud noises, that noise of any kind, even at times the sound of his own voice, causes pain. In acute otitis media, however, there is usually a bulging of the membrane, due to the pressure of the accumulation within the middle ear cavity. The drum membrane is usually of a diffuse deep redness. If seen earlier, the bulging or the diffuse redness may not be present. If it is not, it will soon appear. The appearance at first may resemble myringitis. The acuteness of hearing will, however, be lessened in otitis media. In the exudative type, the surgeon may be able to see the accumulation in the middle ear cavity lying against the drum membrane. This appears as a deep gray or yellowish patch, level across the top and changing its position with the changing of the position of the patient, though always at the lowest part of the cavity. This may not be accompanied by pain, if of the exudative type, but will be accompanied by deafness and crackling noises. If seen in the later stages, acute otitis media may present a deep red membrane bulging either below or at the attic and sometimes pulsating. If late enough so that ulceration of the inner wall of the drum membrane has occurred approaching perforation, there may be discovered at this point a yellow or redish yellow spot. If accumulation has been long pent up, or is caused by virulent infection, tenderness of the mastoid bone will be noticed upon deep external pressure over the region of the mastoid antrum.

The progress of acute otitis media may certainly be influenced by the administration of internal remedies. Surgical treatment, however, is nearly al-

ways early indicated, and its employment produces most satisfactory and quickest results. Relief of tension and promotion of drainage, are the **two** principal points to be most desired. Heat applied externally relieves the pain to some extent in nearly all cases. In all cases some depleting antiseptic solution should be instilled into the external auditory canal. For this purpose a mixture of phenol in glycerine and absolute alcohol is one of the very best. A formula which I use for this mixture is: phenol, pure crystals, forty grains; absolute alcohol, two drams; glycerine, one ounce. It is difficult to get a druggist to put this mixture up correctly as the formula is written. Unless you stand right over him and insist upon the use of the pure phenol crystal, he will use the solution which contains a little water. Water destroys the hygroscopic property of the mixture and ruins it as far as its depleting action is concerned. A low percentage alcohol will do the same thing. This solution is very strong in phenol, but the addition of the absolute alcohol neutralizes the escharotic action. Attention must be paid to the nose and throat. Alkaline antiseptic sprays and douches may be used to advantage. After the nose and naso-pharynx are thoroughly cleansed, inflation of the tympano-pharyngeal tube may be done. The method used for this may be that of Valsalva, or Politzer or by the catheter. Catheterization is much to be preferred. By its use there is less danger of forcing anything from the naso-pharynx into the tube and middle ear cavity. It also has the advantage of directing all of the air pressure force against the one ear for which it is intended.

By using the nebulizer in connection with catheterization, medicines in the form of oily vapors may be thrown directly into the middle ear cavity. By thus opening the tympano-pharyngeal

tube and using external measures to reduce congestion, as counter-irritation or artificial leach behind or in front of the ear, sometimes an acute otitis media may be stopped in its early stage. A nasal douche of a mild alkaline antiseptic solution used copiously is quite an aid in the reduction of the congestion of the naso-pharynx and the cleansing of these membranes. Nasal douches are often given incorrectly. The small glass receptacles known as hand douches, and by the use of which the patient has to throw the head backwards, and introduce a small quantity of water into the nose, and then throw the head forward and expel it, are not only inefficient, but are sometimes positively harmful. By filling the nose and naso-pharynx with a watery solution, and having the head thrown backwards, the solution is very apt to get into the tympano-pharyngeal tube and possibly into the middle ear cavity. This places more fluid into the cavity which we are trying to drain. The watery solutions thus introduced nearly always cause troublesome irritations. The proper way to give the nasal douche is as follows: Use a fountain syringe bag and tube, or a douche can, or any such apparatus by which the flow of the solution is caused by gravity, the pressure of which may be regulated by raising or lowering the receptacle containing the solution. The tip should be one which will enter the nostril a little distance and then close the nostril opening by shoulder expansion of the tip. The patient should lean the head well forward over a basin or bowl, keep the mouth wide open and breathe through the mouth only. Patient should be instructed to not swallow while using the douche. The nasal tip is then inserted into one nostril and the flow released, the solution will then pass up one nostril cross over through the naso-pharynx, and flow out through the outer side of the nose. At least a

quart of the solution should be used. One-half should pass through the nose in one direction, then the tip should be changed to the other side, and the other half of the solution be allowed to pass through in the other direction. The solution should be as warm as can be comfortably borne. At times it may be necessary to apply adrenalin solution, with or without cocaine to the interior of the nose in order to reduce congestion of the turbinates, enough to allow the passage of the douche. All of these measures of which I have spoken are aids in the treatment. As soon, however, as it can be determined that pus formation has occurred in the middle ear cavity, or even that the cavity is filled by pent up mucus without infection, the drum membrane should be opened freely. It is bad practice to wait until the pressure or ulceration shall of itself force an opening through the ear drum. If the drum membrane is opened by the surgeon it affords many advantages over later spontaneous rupture. In the first place the surgeon can carefully cleanse the external auditory canal and make the incision under antiseptic precaution, as far as the external ear is concerned. He can open the membrane at a point of selection where it will least interfere with the subsequent functioning of the conductive apparatus. The wound made is clean cut, with healthy edges and will usually heal readily after the discharge has ceased, leaving a scar which interferes very little with the function of the drum membrane. Again in early incision the contents of the cavity are evacuated before very much ulceration of the mucous membrane lining the cavity and covering the ossicles has occurred. This is a great advantage and shortens the discharging period and prevents chronic involvement. It also prevents to a great extent mastoid involvement. When a case is left for perforation to occur spontaneously, the site

of the perforation is liable to be anywhere. It is always preceded by ulceration at the perforating spot, which may be close to the malleus and may cause ulceration of that bone covering at the same time. When perforation does occur the edges of the opening are ragged and of broken down ulcerated tissue.

Sometimes a piece of the membrane, itself, will be destroyed, and at times so large that the process of repair following will not close the perforation. The point of selection for incision of the drum membrane, is, all things being equal, the posterior inferior quadrant, and close to the wall of the external auditory canal. At times, however, it is advisable to select some other point, especially if the accumulation appears to be localized in some one portion of the cavity. There are times when the accumulation in the middle ear cavity will be almost entirely confined to the attic. If such is the case the membrana flaccida, or the loose portion of the drum membrane in front of the attic will be seen to be bulging and tense. If such is the case it is some times better to make the incision there. Then by having patient lie down upon the affected side, the drainage will usually be satisfactory. The incision which the surgeon makes in the drum membrane should be acutely curved or "V" shape, in order to form a flap opening so that drainage will be unobstructed. The author has long been dissatisfied with the usual instruments used for paracentesis of the tympanic membrane. The method of using the paracentesis spear point needle is unsatisfactory. The flat spear point perforates the membrane and is withdrawn, and the edges of the perforation so made immediately close together, and very little drainage is established. Ordinarily the use of a small curved knife is also unsatisfactory. To make a sufficient incision with the ordinary para-

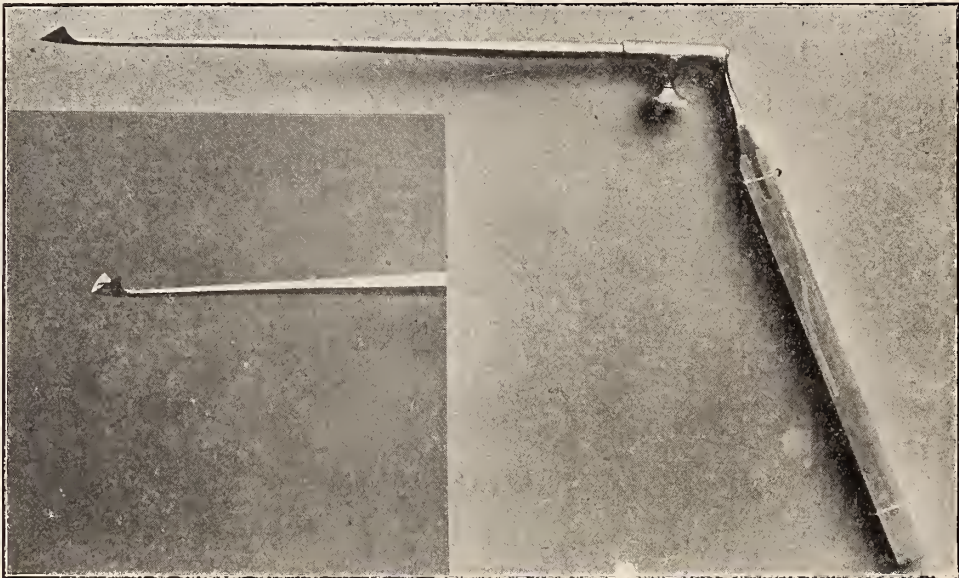
centesis knife requires five distinct movements to make and complete the incision,

1. Pushing the knife through the membrane.
2. Cutting in a certain direction.
3. Turning cutting edge of knife in a different direction.
4. Cutting in that direction.
5. Withdrawing the knife.

When a patient is under a general

knife. It can be quickly used, and yet supplies the "V" incision which is desired for drainage.

The new instrument which I have devised can be used as quickly as the spear head needle, and yet gives the "V" shape incision result. This knife has the form of a spear with the spear blade bent longitudinally upon itself, so that the halves of the blade stand away from each other at a more or less acute angle.



Measurements of Myringotome.

Blade three m. m. high from apex of V. to the highest point of the cutting edges. Four m. m. long from the point of the instrument extending along the V. point to the place immediately below the highest point of the cutting edge. The blades should be two and one-half m. m. apart at their highest point of divergence, and the tip of the blades at their highest point of divergence should be blunt and oval or rounded.

anesthetic, this operation with its several movements can be satisfactorily performed.

When the patient is not under general anesthesia this incision can very seldom be satisfactorily completed. The patient will jerk away before the incision is finished. The author has designed a myringotome which combines the desirable features of both the paracentesis spear and the paracentesis

This makes a spear head with a sharp point and the sharp edges of the blade rising and diverging from each other as they are traced towards the handle of the instrument. The long shank is fashioned so as to be used with the universal handle of the middle ear set. In this way the point of the "V" may be turned in any direction desired.

Heat applied to the external ear usually affords relief from pain. If viru-

lent infection exists, however, with involvement of the mastoid, ice applied over the region of the mastoid in the early stage of such involvement is preferable. After free drainage of the middle ear cavity is established, attention must be given to keeping it so until all discharge shall have ceased. The external auditory canal must be kept as clean and aseptic as possible. There are two methods of accomplishing this. The dry and the wet. The dry method consists of promoting drainage by strips

of absorbent gauze passed into the canal and up to the drum membrane. These strips must be changed frequently, so that the discharge will be removed as fast as it presents itself. The other method is by use of antiseptic douches into the external auditory canal. The dry method is to be preferred if the patient is under the close supervision of the surgeon or a competent nurse. If the patient can not have the close supervision, the wet method is probably preferable.

THE TREATMENT OF EXOPHTHALMIC GOITRE*

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While the pathology of a disease is not positively determined, we find that the treatment of such disease differs according to the various theories regarding its origin, or the processes concerned in the production of its symptoms. The treatment of exophthalmic goitre is no exception to this rule.

At present there are numerous theories regarding the pathology of exophthalmic goitre, but the definite primary lesion, if there be one, has not yet been discovered.

The course of the disease is progressive in all but a few cases and unless treatment is resorted to, may be of fatal termination or, what is as serious, lead to mental derangement, and still later to death. This necessitates intervention.

Although the treatment is still empirical success has attended many methods, this success often being only the amelioration of the symptoms, but

again, the permanent cure of the disorder.

Briefly reviewing the various theories of the pathology of this disorder we find three, or perhaps four, of them claiming attention. The first is, that the disorder is a toxemia due to disturbances in the digestive processes, a lack of oxidation in the organism generally being the starting point of the disturbances of the thyroid.

A second view is that exophthalmic goitre is due to a hypersecretion of the thyroid gland, and closely allied to this is another theory, that the secretion of the gland is perverted, the exciting causes of this hypersecretion or perversion of secretion not being recognized.

Still another theory is that the disorder is primarily a neurosis; that there is a disturbance in the relations between the sympathetic nervous system, the pituitary gland and the thyroid.

Evidence, experimental, pathological, to a slight extent, clinical and therapeutical is produced to support each view in

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turn; but still the point is not yet settled.

Pathologically, there are found constant lesions in the thyroid gland of its structure and contents, and the blood vessels of the gland are found enlarged, the capillaries being dilated and increased in number.

The lesions found in the sympathetic nervous system, and in the pneumogastric nerve and medulla oblongata are not constant lesions and are thought to be secondary. Some changes in the blood have also been observed, but, again, these may be secondary, though they are used to support the theory of a general toxemia.

From the pathological findings we are inclined to direct most of our attention to the thyroid gland itself; and clinically on the part of the thyroid we find in nearly every case an enlargement and increased vascularity.

This increased vascularity by many authorities is considered the chief factor in the production of the disease, and this forms the basis of the most successful methods of treatment, to date, whatever particular form it takes.

Whether the disease, originally, is a general toxemia or a disturbance of the nervous system, when we see the case for treatment we, undoubtedly, have an involvement of the thyroid gland, which, if not the primary cause of the symptoms of this disease, is, at least, a secondary factor, and at this stage, certainly, is rounding out the vicious circle.

A review of the literature to the present time on the subject of the treatment of exophthalmic goitre shows that in all methods, while the items of rest, diet, baths, massage, elimination, tonic, and nutritive medication are recognized equally, the decisive factor of the most successful methods has been that which influenced, by restricting, the vascularity of the thyroid gland.

For instance, one writer reports suc-

cess by the use of heavy doses, long continued, of quinine which acts here beneficially through its "vaso-constricting" action. Others report success from surgical intervention which has for its object the decrease of the vascularity of the gland.

Surgical measures have been so brilliantly successful that one operator thinks exophthalmic goitre should be classified as a "surgical disease." However, this is not always a safe operation. It ought to be early in the course of the disease, as, later, changes in the blood vessels make it more dangerous than it is even naturally. And many patients refuse surgical intervention.

The non-surgical party advise operation only as a last resort when dyspnea threatens life.

Now, there is another agent which answers very definitely to this need of reducing the vascularity of the thyroid gland, acting locally and also through the nervous system on the walls of the dilated and enlarged vessels. This agent is the direct electric current which in addition to its action upon the walls of the vessels produces also a chemical effect in the gland structure itself, making for its better nutrition and hence more normal functioning.

This is no new nor strictly original treatment though the precise method is perhaps personal. For years electricity has been used in the treatment of this disease, but often without any definite idea of what was required, nor how to produce it with the current.

The usual statement in the textbooks is that "electricity may be used." The various modalities, the induced and direct currents, the alternating current, the sinusoidal current and X rays have all had a turn.

After many experiments the French physicians decided in favor of the direct current or a combination of direct and indirect currents, a galvano-faradic

treatment. They report much success with either method in cases where all usual measures had failed.

Personally, my choice is the direct current for its action as above indicated—a contracting of the walls of the blood vessels reducing thus the amount of blood in the thyroid, and its nutritive effect on the glandular tissues.

Now it is not enough to advise the use of the direct current. More definite details are necessary, for while the use of one polarity will give you good results, the use of the opposite will increase the conditions present.

So, as to method: The indifferent electrode, a flat metal one, measuring about three by four inches, is the cathode or negative pole; and this is placed upon the back of the neck. The active electrode is the anode or positive pole, and this, a small round one, two inches in diameter, is applied to the gland itself and to the vessels of the neck. After the electrodes, well covered and well moistened are in place the current strength should be gradually increased to 15-25 ma., if the patient can bear this intensity.

The treatment is an interrupted stable one, i. e., the small electrode is held in one spot 3-4 minutes, then the current being diminished, the electrode is moved to another part of the gland again remaining stationary for 3-4 minutes while the current strength is gradually increased as before. The treatment should be 15 minutes long—7½ minutes to each side of the gland and across it, if all parts are affected. If only one wing is affected, 10 minutes will be sufficiently long for a treatment. Treatments should be given daily at first; and then every other day or later three times a week as long as the rapid pulse, enlarged thyroid and exophthalmos continue.

It will be necessary to treat the skin of the neck every night with cold cream

to be able to give daily treatments as the current intensity makes the skin tender. With care there should be no burning, or electrolyzing, of the skin.

This treatment combined with symptomatic treatment as indicated will in a very short time reduce the unpleasant symptoms and soon produce a permanent cure.

The length of the full treatment will vary according to the severity of the symptoms, the time at which the case is seen and the possibility of carrying out the necessary general measures.

Some cases need only two to three weeks of the electric treatment, finishing the cure by means of remedies and general measures of diet and hygiene. Other cases more thoroughly established will require three or four months of electrical treatment; but, from the first there will be an amelioration of the distressing tachycardia, insomnia and general nervousness.

The pulse generally is decreased during the daily sitting from 15-20 beats per minute, and this decreased rate persists from the first for an hour or so following treatment and after a number of treatments longer, till, finally, the slower pulse is a permanent fact. The benefit to the general nutrition is also noticeable.

The fact that the direct current thus applied meets the most prominent indication for treatment, that it is without danger to the patient, that it benefits not only the local but general condition of the patient, that in case the surgical treatment should finally be decided upon this method has in no way hindered its adoption, but has put the patient into more favorable condition for such operation, bespeaks for it a consideration in these cases.

The following cases illustrate the above:

Case 1.—Female, aet. 35, examined May 6, 1907. At this time she presented the cardinal symptoms of exophthalmic goitre, the pulse was

132-144 per minute, the exophthalmos was marked and the thyroid enlarged. In addition to these symptoms there was loss of flesh, pigmentation of the skin all over the body but especially of the face, a tremor of arms and legs, great fatigue and insomnia.

She was given the direct current in the manner above described and was put upon nerve and heart tonics combined with rest and nutritious diet.

The patient found it necessary to carry on her occupation for two weeks, but in spite of that, during these two weeks the pulse decreased to 126 beats per minute, she looked better and slept well.

In three weeks the pulse varied from 102-84 and at the end of four weeks the pulse remained at 96, the color of the face was whiter, the exophthalmos less and the goitre decreased in size. There was no tremor in legs nor any part of the body and she complained no longer of palpitation. With this patient only three treatments a week were necessary. At the end of the four weeks she left the city; and has not reported since for treatment. At the end of five months she showed no exophthalmos, there was no enlargement of the thyroid, though the pulse was still somewhat rapid.

Case 2.—Female, aet. 34. Showed on examination slight enlargement of the thyroid, pulse 120, digestive disturbances, loss of flesh and lack of strength with tremor of arms and legs.

The direct current was not used in this case at first as it was impossible to manage it; but, later, as the symptoms did not entirely disappear under medication and general care, the direct current was used.

The patient received twelve treatments—three a week; and in six months from the first visit the patient was dismissed without medicine, the pulse being 84, strong and regular, the enlargement of the thyroid all gone; an increase in weight and in general strength. With the exception of the first month this patient continued a part of her regular daily duties, and when dismissed had been carrying on her full household duties for two months. The condition has been permanent over a year.

Case 3.—Female, aet. 42 years. In this case the pulse was never more than 96, but the patient had an enlarged thyroid, exophthalmos, pigmentation of the skin, palpitations, great nervous restlessness, insomnia and night terrors, and tremor all over the body.

This patient was given the direct current at once combined with a sedative nerve tonic. Her hours of resting were increased and attention paid to her general hygiene.

After five or six weeks of treatment three times a week, the patient showed a gain in weight, had no tremor, no night terrors, slept well night and day, the thyroid was nearly normal in size, pulse fuller and less palpitation. In two months patient was dismissed. The cure has been permanent.

The modern trend of scientific research seems to devote its best energies to a study of the etiology and treatment of skin, venereal and genito-urinary diseases. Cures of these will place humanity on a true Utopian plane.

Among the disturbing subjective symptoms connected with gonorrhea is the persisting itching about the meatus urinarius. This is one of the numerous instances in which itching does not betoken healing.

Pemphigus does not necessarily relapse and should never do so under appropriate treatment. Good results may be obtained under a proper course of medication even in pemphigus vegetans.

Is the severity of syphilis decreasing? This question is one which naturally suggests itself when we observe cases today and compare them with accounts which have been furnished to us by the writers of the Middle Ages. Even an examination of the atlases of fifty years ago will easily demonstrate that the disease has lost much in its severity.

If a patient persists in running evening temperatures which cannot be accounted for after a thorough physical examination and blood examination, one should place the patient on increasing doses of the iodids, for the fever may be due to an old syphilitic infection.—*American Journal of Surgery*.

A CASE OF METASTATIC SARCOMA WITH SPECIAL INVOLVEMENT OF THE OSSEOUS SYSTEM.

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I wish to report an interesting case of metastatic sarcoma:

Clinical History.—A female patient, farmer's wife, aged forty-nine, was admitted to the Northern Michigan Asy-

good and it remained so until November, 1907. At this time enlargement of the right breast was noticed; examination revealed three large masses, one in the mammary gland, another midway



FIG. 1

lum, August 10, 1892. She was suffering from paranoid dementia, demented quite rapidly, and became very childish, imagining herself a baby of a few weeks old. Her history stated that she had been confined in an asylum in Ohio, twenty years previous to her commitment to this institution.

On admission, her physical health was

between the gland and the axilla, and a third in the axilla. The last was deep seated and not movable, the other two were more superficial and movable. There was no involvement of the skin, and no infiltration of the surrounding tissues. A diagnosis of sarcoma was made, but on account of the extensive

involvement, operation was considered inadvisable.

The tumors grew quite rapidly, the one in the axilla pushing its way up under the scapula; the breast became red and swollen and the tumor in this region became quite large. The patient was soon bedridden and helpless, and one day it was noticed that she was unable to use her right arm, and that it was red and swollen at a point midway

The right arm was cut into at the site of the swelling, and the bone was found to be separated, was very soft and could be easily crushed with the fingers.

On removing the scalp, numerous small softened areas were noticed on the outer surface of the skull. On removing the skull cap, it appeared quite soft and was found to be tightly adherent to the underlying dura. The inner surface of the skull cap was studded with



FIG. 2

between the upper and middle third of the humerus.

The patient's condition gradually became worse, death occurring in April, just five months after the tumors were first noticed.

Post-Mortem Examination.—At autopsy the following conditions were found: One tumor in the breast, another in the axilla, and a third between these two. On section they all presented the same appearance, being milky white in color and of a jelly-like consistency.

little jelly-like growths, (Fig. 1), some of which had eroded entirely through the skull and were visible on the outside. Others which only involved the inner table, were removed when the dura was detached from the surface of the skull. These are shown in Fig. 2, giving the appearance of small tumors on the dura. They were merely adherent, there being no involvement of the substance of the dura.

On opening the thoracic cavity, the ribs were found to be friable and easily

crushed. All the bones which were examined showed this friable condition.

Other pathological conditions present were, enlarged thyroid gland, fatty tumor of the right buttock, three polypoid tumors in the uterus, and an enlarged spleen.

Histological Examination. — Sections taken from the breast tumors, showed typical small round celled sarcoma. The tumors in the skull cap were histologically the same as those in the breast. Metastatic tumors were not found in

any of the other organs. The liver showed marked fatty degeneration.

The interesting points in this case are: (1) The extensive metastasis in the osseous system, there being no other discoverable metastases in the other organs. (2) The fact that the sarcomatous tumors developed late in life, the patient at this time being sixty-two years of age. (3) The tendency to tumor formation in the patient, there being four varieties of tumors present; sarcoma, fatty, polypoid and cystic (thyroid.)

WHAT THE MANUFACTURING DRUGGIST DOES FOR THE DOCTOR

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There are a great many subjects upon which most people have no formed opinions, and when they have opinions and know what they think, they do not know why they think so. As Henry Sidgwick expressed it:

“We think so because all other people think so

Or because—or because after all we do think so;

Or because we were told so, and think we must think so;

Or because we once thought so, and think we still think so;

Or because having thought so, we think we will think so.”

The lack of quality of certain patent medicines has been brought forcibly to public notice. As physicians, however, we are much more interested in the remedies which have the sanction of the medical profession. After a new chemical substance has been isolated or a new medicinal use discovered, it is nec-

essary for someone to produce it in sufficient quantity to make it marketable. This requires money, time and experience which the discoverer is rarely able to supply. The manufacturing drug houses have many times taken up this work and brought valuable remedies within the reach of the medical profession. Let us consider for a moment, the products of the manufacturing druggists. They are diphtheric antitoxin, thyroid extract, adrenal solution and other biologic products, tablets and pills of uniform dosage, standardized tinctures and fluidextracts and special formulas. These products are for the use of physicians in treating the sick. As in other lines of business the supply depends upon the demand, so the amount of medicine required by physicians is the chief factor in regulating the drug business. It is interesting to study the division of labor and to note reasons why the physicians cannot make their own infusions and tinctures and pills as

in olden times, and why even the retail druggist is unable to do all pharmaceutical work that is required nowadays. The enumeration of the products of the manufacturing druggist, especially the biologic products, shows the necessity of well-equipped laboratories. As an example we will take diphtheric antitoxin because it is one of the oldest and best known biologic products. It is not the manufacturer's discovery—it is not even an American discovery—but it is the manufacturer who takes out the government license and keeps the properly equipped stable and laboratory for its production. Of all the remedies of which we know this one is the most wonderful. The cost of production of antitoxin is high on account of the expense of immunizing horses, since all horses are not capable of producing antitoxin and it may happen that several have to be tried before a susceptible animal is found. When the discovery of antitoxin was made, the manufacturing druggists became interested at once, and the marketed article has been improved at various times since by work done at their expense. For instance a convenient syringe is now sent out as a container, which makes the injection of antitoxin much easier, and almost removes the liability of contamination with bacteria.

When as the result of research work by physicians and scientists in a manufacturing laboratory, a new remedy is put on the market, it has been considered a convenient protection to inaugurate a trade name for the article, for example antiphlogistine and listerine. These two preparations are used advisedly, because the preparations have had such a widespread use among physicians that formulas which are nothing more nor less than imitations of them have been placed in the last edition of the U. S. Pharmacopeia.

I wish to leave the subject of my

paper to explain what is meant by a patented medicine. A "patent" medicine is not a patented medicine. Patented remedies are those which may be controlled by patents in two ways, by a product patent or by a process patent; and when a process is patented anyone may find it out by writing to the patent office in Washington and enclosing the necessary fee of a few cents. This knowledge of course cannot be utilized by them in the manufacture of the product until after the patent expires. Sulfonal and most of the foreign preparations which come to us are of this type. The so-called "patent" medicines are not patented at all, and never have been—with one exception. The term "patent" medicine is a misnomer. The name of a remedy may be copyrighted, but this is hardly necessary as the person or firm that used an original name has a common law right to it. The patenting of a process is now important to the manufacturer, who may spend considerable money on scientific work done in perfecting a method, and his only hope of reimbursement lies in a period of exclusive production. A proprietary remedy is simply one which has an owner—a proprietor—and may or may not be a "patent" medicine. The doctor who has a special formula put up becomes its proprietor.

A perusal of the eighth edition of the *Pharmacopeia* will show that various combinations originally put out under a trade name have been imitated in some of the recent additions to this volume, not under the original trade names, but names found suitable by those who compiled the book. Kataplasma Kaolini corresponds to antiphlogistine and presumably would not have been found in the pharmacopeia except for the intense popularity of the well-known preparation of Denver-mud, glycerine etc., which has proved useful and tremendously salable. The U. S. Dispensary

says of Kataplasma Kaolini: "This cataplasm was introduced into the U. S. Pharmacopeia (eighth edition) to supply the demand for an antiseptic poultice." It is obvious that the demand was created by the thousands who have used antiphlogistine. Antiseptic compound, U. S. P., is a good copy of Listerine, a proprietary germicidal solution used extensively as a mouth wash and to moisten dressings of wounds. The following is a list of remedies selected from the U. S. Pharmacopeia and National Formulary, of which proprietary remedies are prototypes. It is given to show how difficult it is for a physician to entirely avoid prescribing proprietary remedies by confining his choice to the remedies in the pharmacopeia and National Formulary. The equivalent in substance cannot be made different by a change in name.

Compound Digestive Elixir, N. F., corresponds to the old proprietary Lactopepsin.

Glycerinated Elixir of Gentian, N. F.—Gray's Glycerine Tonic. Essence of Pepsin, N. F.—Fairchild's Essence of Pepsin. Hexamethylenamine, U. S. P.—Urotropin and Uretone. "Alkaline Antiseptic," U. S. P.—Glycothymoline. Compound Solution of Cresol, U. S. P.—Lysol and Lysitol. Solution of Peptonate of Iron with Manganese, U. S. P.—Gude's Pepto-mangan. Milk of Magnesia, N. F.—Phillip's milk of Magnesia. "Chloral and Bromide Compound," N. F.—Bromidia. Antiseptic Solution, U. S. P.—Listerine. Guaiacol Carbonate, U. S. P.—Duotol. Creosotal Carbonate, U. S. P.—Creosotal. Compound Mixture of Chloroform and Cannabis Indica, N. F.—Chlorodyne. Compound Acetanilid Powder—Antikamnia. Sulphonethylmethane, U. S. P.—Trional. Sulphonmethane, U. S. P.—Sulphonal. Comp. Syrup of Hypophosphites, U. S. P.—Fellow's Syrup of Hypophosphites. Compound Tincture of Viburnum, U. S.

P.—Hayden's Viburnum Compound. Compound Resorcin Ointment, N. F.—Resinol. Ethyl Carbamate, U. S. P.—Urethane.

Among the less recent examples we have Powder of Ipecac and Opium, or Dover's Powder, made originally by Dover, who is said to have been a quack. The present formula is almost precisely the same as the original, all attempts to improve it having been ineffectual.

Compound Powder of Morphine or Tully's Powder, was devised by Wm. Tully, of New Haven, Conn., and is another example in point.

Compound Acetanilid Powder contains acetanilid, caffeine and soda bicarbonate. In regard to this powder the nineteenth edition of the U. S. Dispensatory says: "This formula represents the essential composition of most of the proprietary headache powders."

Morphine was made by Merck as early as 1827. Mr. Merck was personally acquainted with certain investigators and shared their enthusiasm. Recognizing the importance of morphine to medicine he undertook its manufacture, although the venture was much against the advice of his conservative friends.

Bismuth and Ammonium Citrate was first made by Schnacht, of Clifton, England, as a secret preparation. A chemist having succeeded in analyzing it, reported his findings to the pharmaceutical society and Schnacht, who was present, acknowledged the correctness of the analysis, but denied having held the remedy a secret from physicians. The analyst gave the formula to a firm in Chicago, but it was not until numerous attempts had been made that a product with all the desirable qualities was obtained. A modification of this process is the one in use at the present time.

Many more examples might be cited for it is the way of modern medicine that when a remedy becomes very widely known and is shown to be of

value it finds its way into the U. S. Pharmacopeia, but always without credit to the originator. Lactophenin, Aspirin, Dionin, Betaeucaine and Benzozol are remedies originated with drug manufacturers under the protection of patent, and which we will expect to find in the (next) ninth edition of the U. S. Pharmacopeia. It is quite true that the pharmacopeia is not a mere list of articles approved by scientists and physicians, but is intended to give the composition of medicinal products, the extensive use of which justifies a notice of their composition. Nevertheless, trade names are carefully excluded from the volume, and teachers in most medical schools eschew proprietary remedies and recommend to their pupils, prescription writing only in accordance with the pharmacopeia and National Formulary. We regard the pharmacopeia as our standard, yet few physicians own one and a casual glance at one belonging to some druggist is about all we see of one. We have a new pharmacopeia only once in ten years, so new remedies are necessarily slow in finding their way into it. Some of the methods given for drug preparation are very old-fashioned. A manufacturing druggist has lately stated that the firm is unable to make tincture of digitalis according to the method given in the last edition of the U. S. Pharmacopeia, which will come up to their standard of quality according to chemical and physiologic tests. The method given in the pharmacopeia fails to thoroughly extract the drug from the plant. They therefore make two preparations—one tincture of digitalis, U. S. P., and one which is stronger. The strength of the tincture of digitalis is determined in the laboratories by injecting a certain quantity, definitely diluted, into the sub-lingual sac of the frog. For each gram of the frog's weight a given amount of the diluted tincture is injected.

The physiologic testing of drugs has been used for some time by the manufacturing druggist. It is the only reliable way of testing certain drugs, such as digitalis and ergot, and it is one of the best things that has been done for us by the manufacturer. A drug which is always physiologically tested is ergot. When properly active, ergot blackens the comb of the Leghorn fowl. This test, which has made ergot a reliable remedy, was inaugurated by the manufacturing chemist. As preparations of ergot lose their activity more rapidly than most drugs, and as ergot is used when positive results are desired immediately, it is obvious that a dependable preparation is most important. Some drugs are physiologically standardized and some are physiologically tested—some are both standardized and tested. Diphtheric antitoxin is tested to insure its freedom from bacteria by injecting it intraperitoneally into a guinea-pig. It is also standardized on other animals of the same species by injecting it subcutaneously with a toxin of known strength.

The extract of suprarenal gland is tested on dogs as a routine part of its production.

Strophanthus is also tested physiologically before it is put on the market by the drug manufacturer.

The eighth revision of the U. S. Pharmacopeia requires an alkaloidal strength for a number of drugs, about 20, but as yet there is no reference to physiologic standardization, such as have just been mentioned as routine tests by the manufacturers and which will come and ought to come into recognition by the pharmacopeia.

In addition to improving the quality of our old, well-tried remedies, many others have been brought forward through the efforts of the drug manufacturer: cascara sagrada, yerba-santa, grindelia robusta, kola pichi, jaborandi and others. The drug houses have

brought out the concentrated tinctures and compressed tablets of exact measure. They have introduced the chocolate, sugar and gelatin coating of pills, and in many instances have "purified" the drug by removing foreign and inert substances. Quinine is a largely-used drug which has been greatly improved by the manufacturing chemist. Scientists from the drug houses have been sent out as special investigators to the countries where the calisaya bark is gathered and have studied the various alkaloids contained in it, determined the best time of year for gathering it, and learned about its proper treatment in every particular. There is said to be only about a half-dozen specifics in the whole materia medica, of which quinine is one. There is no doubt that it should be of reliable quality, if it is to be efficacious. In considering the prevalence of malaria in the pioneer days, it has been said that without quinine Michigan could not have been settled.

Again vaccination has almost eliminated smallpox. The drug manufacturers gave the medical profession a reliable bovine vaccine. They claim no honor of the discovery of vaccine—that is already finely divided between the medical profession, Lady Mary Wortley Montague, and others—but they have supplied the demand for a vaccine free from tetanus, syphilis and other bacteria. A few boards of health make vaccine, but the greater part of all that is used in this country is made by the manufacturing chemist and retails at about ten cents for material enough for one individual. The price is low, considering that vaccine is not a product of unskilled labor. Physicians and scientists are employed in collecting and testing the virus. This is also true of other biologic products, such as the digestive ferments. Since their introduction in the treatment of disorders of the alimentary canal the drug houses have pro-

duced in a convenient form such ferments as diastase, pepsin and pancreatin. Laboratory tests on these are carefully carried out to show the activity of the ferment in the test-tube. That is all the proof that could be expected of the drug house. Proof of the efficacy of a preparation lies with the physician and the patient. The drug house is only the supply house for the physician, and well have they met his needs, albeit sometimes anticipating them.

At the present time considerable work is being done at the various drug laboratories on tuberculins and bacterial vaccines. It may happen that investigators in the laboratories will be the first to find a specific for tuberculosis. At any rate, they are looking forward to putting one on the market, whether the discovery comes from them or from other workers. In either case the medical profession will try it thoroughly and accept it solely on its merits.

Quite recently the concentrated diphtheric antitoxin has come into use and the various biologic laboratories are offering a highly concentrated product, prepared according to the best scientific method, tested and standardized, representing in bulk only about one-third of the whole antitoxin, but having the full unit strength. Physicians are able to make much better use of such products as thyroid and suprarenal extract since they are supplied in an easily portable form. When the first came into prominence no tablet form of either was obtainable nor was a carefully standardized product.

Instead of originating any methods suppose the manufacturing druggists made only biologic products and preparations found in the U. S. P. and National Formulary? Their products would fulfill our present needs, but a large source of future remedies would be cut off, for if the manufacturer is restricted in the output it will decrease his pro-

gressive work on preparations which would be worthy of addition in the future to our drug armamentarium. Much credit is due the manufacturing druggists for taking up the work of various investigators and for the agility in keeping their products up to the demands of the rapidly advancing science of medicine.

Laboratory experimentation should be considerably in advance of the use of

the products by physicians. "Whenever practice outruns the laboratory, and more or less impatient applies the latter's result to the prevention and cure of disease it frequently deals with half truths whose application may be harmful. * * * It is this sense of being surrounded by half-truths which should stimulate us all not to rest content with them, but to use our efforts unremittingly until they have been made whole."

DIFFERENTIAL LEUCOCYTIC ESTIMATION IN THE DIAGNOSIS OF ABDOMINAL NEOPLASMS.

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Since the pioneer work of Metschnikoff and Bordet in establishing our knowledge of the role of the polymorphonuclear leucocytes, differential counting of the white cells has become a commonplace clinical procedure. The desirability of a numerical and percentage estimation of the white cells in various affections is now so well established that in many of the infectious processes a careful examination of the blood for hyperleucocytosis is considered indispensable for proper diagnosis.

Who, with this certain laboratory method at his disposal, would fail to avail himself of it in the face of a confusional differential diagnosis between appendicitis and typhoid fever, or between typhoid fever and a central pneumonia? The presence of an increase in the polynuclears would surely eliminate typhoid in either instance while it would, at least, favor the other diagnosis.

In acute infections attended by local reaction, the results of a leucocytic count

are infallible and, in case of obscurity, their teachings invaluable. The presence of fluid accumulations or other unorganized extravasations, wherever found, except in rare instances, are surely disclosed by recourse to a percentage count of the polymorphonuclears. These indications have long been recognized by the general profession and but few of us do not heed them in such instances. But, I believe, there still remains a large class of cases, in which for purposes of careful and accurate refinement of diagnosis a determination of the presence or absence of polymorphonuclear hyperleucocytosis is equally reliable and fully as important. It is in this class of cases, too, that the importance of such a determination is not generally recognized. At least, I know its teachings are but rarely made use of. The class to which I refer is that of nonmalignant tumors and their complications.

As a general rule we are all familiar with the increase in the polymorphonu-

clears both absolute and relative which is found in malignant disease. The occurrence of an exaggerated polymorphonuclear count is not, however, invariable, its presence and extent depending upon a number of factors.

Therefore, a differential count of white cells may, perhaps, tell us something of the resistance being offered to the progress of the disease, a great increase in the count denoting a strong resistance, while a normal or diminished count indicates approaching dissolution. Beyond this, little is accomplished.

But an estimation of the leucocytic count in abdominal neoplasms of non-malignant character is of decided importance. In uncomplicated cases of this variety, blood changes affecting the whites do not occur. It is, therefore, for the detection of complications, especially when operation is contemplated, that a white count is invaluable. The following four cases, all referred to me for operation within the past week, are presented as practical illustrations of the question under consideration:

Case 1. J. M., age 54, merchant, was referred for operation June 2nd, with the following history. Until the present illness, he cannot remember ever having a sick day. About February 1st, he began to suffer from loss of appetite and gaseous eructations. He was conscious of a feeling of distention in the abdomen which seemed especially marked over the upper half. Because of this condition, he applied to a physician for relief. He says no examination was made at this time; he was given some medicine. No relief followed. About March 1st, he experienced a severe stabbing pain in the left side of the abdomen which, when questioned, he locates at a point formed by the junction of a line extending to the left from the umbilicus with another let fall from the middle of the left costal margin to the middle of Poupart's ligament. From a pain which was paroxysmal and stabbing in character, the condition changed to one of a constant, dull ache. At the time of my first examination he had a temperature of 101°; pulse 104. His general appearance was good.

He had lost twenty pounds in weight but still weighed about 170. His cheeks were somewhat whitened although cachexia seemed absent. Conjunctival and buccal mucosae were pale, tongue slightly coated and flabby. Inspection of the abdomen showed a rotundity devoid of irregularities. Palpation disclosed a hardened area to the left and slightly above the umbilicus. Deep pressure showed a large nodulated mass, immovable, and extending downward and in all directions within the abdomen. No fluctuation could be determined. He had been seen by an eminent surgeon and inoperable sarcoma diagnosed. A blood examination was decided upon. This showed a hemoglobin content of 80%, total whites 14,700, polymorphonuclears 90%, mononuclears 10%. Gangrenous degeneration of an omental sarcoma or simple long-standing abscess was diagnosed and an operation advised. Incision over the point of superficial hardening allowed the escape of about a quart of greenish-yellow pus. The cavity surrounded the umbilicus and included it. After a thorough examination of the cavity and surrounding mass by bimanual palpation, the wound was closed with drainage *in situ*. Smears of the pus and agar slant cultures showed staphylococci. Longstanding abscess was the diagnosis and the post-operative history has born it out, for the surrounding mass has now disappeared and the wound is rapidly granulating.

Case 2. Miss K. M. N., age 56, had had a large fibroid of the uterus for about 27 years. It had been slowly increasing in size and for about a year back had been causing considerable pain. Nausea had been frequent, bowel movements painful, micturition frequent and distressing. She protested against operative removal. Finally her general condition became so unbearable that operation was consented to. She was now so enfeebled that a successful issue was despaired of. She could retain nothing in her stomach, the pain was excruciating, her pulse from 110 to 130 a minute and weak. Fever of an ephemeral character has been noted on several occasions during the past year but always disappeared. She entered the hospital June 4th, with a temperature of 98.8°, but for the next two days the thermometer registered only from 98 to 98.4°. Blood examination showed hemoglobin 70%, erythrocytes 4,200,000, with considerable poikilocytosis, whites 15,100, polymorphonuclears 86%, mononuclears 14%. Gangrene or infection of the growth was diagnosed. At operation, about

three quarts of greenish-yellow purulent appearing material escaped when one angle of the tumor ruptured. It was a huge fibro-myoma of the uterus with subsequent degeneration of the interior of the mass. A complete supra-vaginal hysterectomy was performed and intra-abdominal drainage inserted. Microscopical and cultural examination of the fluid showed it to be free from micro-organisms and to consist solely of tissue detritus. Convalescence has been uninterrupted.

Case 3. Mrs. M. K., age 54, had noticed an increasing abdominal enlargement for about one year. She presented herself for operation June 2nd. Menstruation had last occurred February 1st, and since this time growth of the abdomen had been far more rapid. For about one month back, she had had a great deal of pain, especially in the right iliac region, in addition to annoying symptoms. Abdominal and vaginal examination revealed a large, somewhat irregular tumor involving the uterus. From the history and signs, fibro-myoma was diagnosed. Fever was entirely absent but, as a routine measure, the blood was examined for leucocytosis. The following count was made; leucocytes 10,200, polymorphonuclears 79%, mononuclears 21%. Some complication of an inflammatory nature was suspected. Operation confirmed the nature of the growth and revealed the presence of double pyosalpinx, the tube on the right side being the size of three fingers.

Case 4. Miss L., age 44, first seen June 7th. She gave a history of rather rapid abdominal enlargement extending over a period of about eleven months. Regular menstruation had been present until about four months ago. The vaginal inspection showed purpling of the mucosa but only such as might be accounted for by pressure. Ballottement could not be elicited. Digital examination showed an enlargement of the uterus strongly suggesting pregnancy. Inspection and palpation of the abdomen showed a uniform tumor mass, centrally located, which extended upward to a point four finger breadths below the xiphoid process. A blood examination showed a normal number and percentage of cells. The diagnosis leaned toward fibromyoma although pregnancy could not be entirely excluded. Abdominal section revealed a symmetrical-shaped tumor of the uterus which measured eleven by eight inches, fibromyomatous in character.

The occurrence of several cases of this character in my practice in so short a time, all presenting complications which, in some instances at least, would not even have been suspected had not the routine examination of the blood disclosed them, has impressed me so deeply, that I feel the time is ripe to plead for the more frequent routine employment of the procedure.

Reference to any but the newest works on examination of the blood, and even some of these, discloses the statement that a moderate leucocytosis (10,000 to 13,000) exists in pregnancy. This is not in accord with the latest investigations (Greco and Zangemeister), however, and certainly does not conform to our own findings. In the absence of suspicious pelvic conditions antedating the pregnancy, we can say that we have failed to note an increased polymorphonuclear count in the parturient condition. According to Hall, hyperleucocytosis does not appear until the onset of labor.

Were leucocytosis really present throughout pregnancy, as is so frequently stated, case 4 would not have come to the table with the diagnosis more or less in obscurity. Pregnancy could have been ruled out when the number of white cells showed no increase.

With the knowledge before us that malignant disease often does and pregnancy uniformly does not product leucocytosis, the value of estimating the percentage of white cells in the circulation of an individual with an abdominal neoplasm cannot but impress us and should demand of us more frequent consideration.

In the benign conditions hyperleucocytosis unerringly denotes the presence of dangerous inflammatory or degenerative processes which demand especial care at the time of operation to safeguard the life of our patient.

The presence of actively forming re-

active adhesions between the growth and the visceral and parietal peritoneum and omentum is indicated by a moderate increase in the percentage of polymorphonuclears in addition to the clinical symptom of pain.

Necrobiosis or gangrene of a portion of a fibroid or infection of cystic contents is unerringly detected by a high polymorphonuclear count, even in the absence of the usual clinical symptoms of these complications. Quiescent pus tubes as a complication of fibro-myoma of the uterus is another condition whose presence may be unsuspected without an examination of the content of white cells in the blood.

Knowing that an inflammatory condition and perhaps virulent pus is present, our attitude in and plans for the case are entirely changed. Pus, in all probability containing active organisms, demands a delay of operative interference. Such cases do best under the judicious application of ice and rest in bed with such symptomatic treatment as may be deemed necessary from time to time. Under a waiting regime, the acute process, with but rare exceptions, rapidly subsides and, after a varying period has elapsed, such cases may be operated upon in the quiescent stage with very little danger of disastrous results. Microscopic examination of smears taken from the pus shows organisms with granular protoplasm which takes ordinary stains poorly or not at all, which indicates their attenuated character. The uninterrupted convalescence of the patient bears out the wisdom of our waiting, such wounds as a rule healing by first intention.

In the light of these results, judicious, watchful waiting has become a methodic procedure with me to which I feel can be attributed many a successful issue in what I know would otherwise have been a fatal operation. In no other class of cases is a better knowledge of when and

how to wait required of the surgeon. His success depends fully as much, if not more, upon knowing when to operate than it does upon how to operate. Who of us has not seen cases of appendicitis succumb as a result of too early use of the knife? Who has not witnessed the terrible results of disturbance of inflamed pelvic organs before the acute inflammation or the exacerbation of a chronic inflammation had completely subsided. Again, I say, the utmost caution and good judgment is required in the presence of pus. We must know when to wait, when it is absolutely necessary to wait, and when immediate action is demanded. I need not point out the disastrous results of failure to measure up to the requirements of the case. We are all familiar with them. A percentage count of the leucocytes will at least give us an inkling of the severity of the infective process and help us in making our decision concerning the course of action indicated.

When immediate interference is demanded, the findings of a blood count will often alter our entire plan of attack. Operation for drainage in appendicitis with abscess formation, uniformly performed by the abdominal route, is anatomically indicated and often surgically more proper at the outer border of the quadratus muscle. All our manipulations being extraperitoneal, much of the attendant danger is avoided and many of the annoying sequelae circumvented. In case one, above enumerated, our first inclination would be to make a median incision and attempt extirpation of the mass, followed, perhaps, by resection or an anastomosis of gut. Our plans were entirely changed upon the detection of the enormous leucocytosis, resulting in the happiest of results.

"Forewarned is farearmed" is an axiom which in these conditions is forced home upon us. If we heed the warning, escape of the infective products into the

general paritoneal cavity can be effectively prevented and the percentage of recoveries from an otherwise severe operation materially augmented.

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ASEPSIS IN OBSTETRICS*

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If we would know, realize and appreciate the full freedom, the large liberty, and the perfect government growing out of a democracy, we must of necessity go back over the historic ground of the past; we must mingle with the founders of our country; we must wander through the various scenes and partake, in some degree at least, from Imagination's Casket, of the privations, the sufferings, and the hardships of the "First Settlers." And when all this has been done we must cross the broad Atlantic to the home of feudalism and there follow the well-nigh imperceptible thread back, and back, until we find ourselves groping in the gray dawn of the unknown. And so it is in studying the advancements made in this noble profession of ours. Surgery, together with all its allied and correlated branches, seems to us today so matter of fact, so simple and self-evident in all of its details, that we are apt to take it as an undeniable fact that this bacteriological perfection, which is the common knowledge of us all, has always existed; but not so, if we would know,

realize and appreciate the perfect technique of today we must go back over the path trod by our predecessors.

In no department can this be more truthfully said than in Obstetrics. The very common sense and matter of fact precautions practiced today in this branch of medicine are so axiomatic to the average mind that we are oftentimes in danger of overlooking the struggles, ridicules and acrimonious debates through which the contentions passed before the present perfected state and conditions were attained, and at last became the accepted dictum and belief of the entire medical profession.

Would we know, realize and appreciate what this means, and has meant, to the world of mothers of the past and future, we must let our memories and imaginations have full sway, as they sweep over the vast field of suffering, invalidism and death previous to the adoption of Anti-Septicism and Asepticism in the general practice of obstetrics.

More than half a century has rolled away since the memorable Friday evening in Boston when our own Oliver Wendell Holmes presented his epoch-

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making paper on the "Contagiousness of Puerperal Fever." Truly it was an immortal essay. He startled his hearers with the sentence, "The time has come when the existence of a private pestilence in the sphere of a single physician should be looked upon, not as a misfortune, but as a *crime*." This, gentlemen, was five years before Semmelweis, a young assistant working in the maternity hospital at Vienna, was laughed to scorn and the madhouse, because he persistently held that every case of puerperal fever was caused by the absorption of putrid animal material.

These two contentions of Holmes and Semmelweis, standing side by side, marked the heavens with the "first steps of day." It was the beginning of the gray dawn of the morning that was breaking in upon suffering humanity, and which was destined to unfold into the bright, clear light of a grand and glorious day. We know today that puerperal fever is puerperal infection; we know how to prevent it, and we cannot, by any modern sophistry, shift the responsibility.

Those of you who have the fourth edition of Playfair, issued in 1882, will find that while he includes all puerperal fevers under the head of puerperal septicemia, he nevertheless admits that "there were facts difficult to reconcile with theory and for which we were unable to give a satisfactory explanation." In the year 1883, Thomas Moore Madden, speaking before the British Medical Association, said that it did not matter by what term or terms we distinguished the malady, provided we recognized that there was "a specific infectious disease consequent on parturition." Kindead, Professor of Obstetrics in the University of Dublin, taught that "such fever, from whatever sources arising, except septicemia, is a specific infectious disease, and like those diseases, occurs sporadically and epidemically.

It was during the winter of 1883 and 1884 that puerperal fever was brought up prominently before the profession of America by being thoroughly discussed by the New York Academy of Medicine in December of 1883. It was at this meeting that Thomas defined puerperal fever as "an infectious disease due, as a rule, to septic inoculation of wounds of the genital tract." It was at the next meeting that Fordyce Barker, that grand and commanding figure in American medicine, took part in the general discussion; but unlike Polk and Thomas, who had turned their faces toward the rising sun, Barker saw it sinking slowly in the west and beheld only the dying day. He clung to the old dogma of a specific infectious disease and ridiculed the advanced ideas of his colleagues as follows: "Does every parturient woman in performing the function of maternity, like the scorpion that carries in its tail an agent for suicide if death be threatened by fire, generate an equally fatal poison in a corresponding locality? If so, then the state should make child-bearing a penal offense for families who do not have means enough to carry out elaborate antiseptic requirements." While, perhaps, a majority of the profession held that puerperal fever was a septic poison, no one seemed to have a very clear or definite idea as to the nature of the poison. Carbolic acid had been used as a disinfectant in Copenhagen Maternity since 1870, as it had also been by many obstetricians.

But the time was ripe to put away the time-worn dogmas—to bury forever in the grave of the historic past the ancient conceptions of the causative factor of the slayer of mothers, and the despoiler of homes, and in its place to establish the life-saving gospel of surgical cleanliness. The first demonstratable crusade was inaugurated in the New York Maternity. The mortality in this hospital in 1881 was 2.36% and was thought to

be exceedingly low. In 1882 it was 3.25%. During the year 1883 out of 345 parturient women 30 had died, and the morbidity was something enormous. Toward the end of this year the mortality had so greatly increased that one woman in four delivered died.

It was in October of this year that radical and systematic changes were made in this maternity. To no man in this country is more honor due than to Dr. Henry Garrigues, of New York. When he assumed charge of the New York Maternity in the fall of 1883, he brought to the service the fulness and enthusiasm of maturity, together with the thoughtful, calm and energetic doggedness that always marks a man as being one that is and will be superior to the emergency. He laid down principles broad in their comprehension, far-reaching in their influence, and which were to be brilliant in their achievement. Sulphur was freely used for fumigation; soap and water followed by the application of a strong solution of bichloride was the menstrum with which the floors and walls received their new baptism of asepsism, and in order that the new baptism might become efficacious and entirely supplant the old, the floors of the wards were sprinkled several times a day with bichloride solution. Visitors were not allowed to visit the wards; the attendants were not permitted to visit other hospitals nor to enter the dead-house. Each patient on entering received a bath and clean linen. The abdomen was washed with soap and water, as were also the genitals, followed in the latter by bichloride. The vaginal douche was used in every case, using about two quarts of the bichloride solution. No vaginal examinations were permitted except, mark you, until after the hands had been scrubbed with soap and water with a good brush and then soaked in 1/1000 bichloride. As soon as the head appeared at the vulva a piece

of gauze soaked in the bichloride solution was applied to the parts. As soon as the child was delivered the parts were covered as before. The placenta was not ruthlessly torn from its attachment, but gently expressed by the Crede method. If the fingers had been introduced into the vagina or uterus, then it was followed by the douche, but not otherwise. Only those of you who were either in active practice or were students at that time, know of the skepticism and ridicule with which this treatment was received. We all know what its influence was; how the pestilence, together with all its dread, was driven out never to return. Now, in three months after the introduction of this treatment, or rather the adoption of these preventive measures, Dr. Garrigues could write, "The effect of this treatment has been wonderful. As if by magic all trouble disappeared. Ninety-seven women have been delivered since its introduction and not only has none of them died, but there has scarcely been any disease among them—only three have had any rise of temperature. The pavillions are scarcely recognizable. Where we used to have offensive odors, feverish, prostrated or despairing patients, over-worked nurses and despondent doctors, the air is pure, the patients look well, their temperatures are normal, the nurses are cheerful and the doctors happy." Gentlemen, in the full light of these facts and experiences, what general leading his armies over the bloody battlefield to the victorious heights beyond has contributed to the world's progress and happiness more than have those men who defied scorn and ridicule that they might bring joy, happiness and life itself to the homes of humanity? Surely, "Peace hath its victories far more than war," and while the honors and emoluments of this world come to our profession very tardily if at all, yet we know that somewhere in the great

unknown future, we shall receive our
reward.
"For tho' from out our bourne of Time
and Place

The flood may bear us far,
We hope to see our Pilot face to face
When we have crossed the bar."

THE DIAGNOSIS AND TREATMENT OF SOME CARDIAC ARHYTHMIAS.*

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In the whole domain of modern medicine no achievements attest more strongly to the results of scientific research, than the advances that have been made during the past five years on the study of the heart. Overshadowed successively by the brilliant work in bacteriology, serum reactions, and serum therapy, the endless labors on the physiology, pathology and clinical symptomatology of the heart, stand today as monumental evidence of the advances that have given to medicine new and important knowledge on this subject. I shall not presume on your time to review the history of cardiac diseases. You have all at some time read the discoveries of Harvey, on the circulation; of the work of Auenbrugger on percussion; of Senac on pathology and rational therapeutics; of Corrigan on the pulse; the fascinating descriptions of organic cardiac diseases by Corvisart, Skoda, Stokes, Parry and Flint. During all this time our knowledge has really been confined to organic heart diseases. We have gladly accepted conditions of incomensation following valvular insufficiencies or myocardial degeneration as typical of organic disease. But on the other hand, irregularities and intermitencies, that have had no evident basis

in gross cardiac lesions, have been complacently grouped under the ever convenient head of functional neuroses.

Out of this chaos into which ignorance has thrown many inexplicable functional conditions, modern laboratory research and clinical observation have succeeded in formulating many interesting pathologic states. In no field of medicine do we find more beautiful examples of how purely scientific investigation has worked hand in hand with bedside study, in unravelling the etiology of a group of perplexing conditions. Gaskell, Richet, Engleman, Erlanger. His and other physiologists have sought to explain the extra- and intra-cardiac mechanism of heart beat. Cushney, Wenckebach, Krehl, Franck, Gerhardt, are among those pharmacologists who have studied the behavior of the heart, under the influence of toxic substances. Hofman, Mackenzie, Hering, Hirschfelder, Dock, Schmoll and many others by graphic records have determined upon clinical classifications for cardiac arhythmias. Finally we are indebted to the pathologists who have stepped in and carefully sought out minute lesions that correspond to the symptomatology of the cardiac conditions.

At the present time we have arrived at the point where we can make use of the

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discoveries in these several fields, catch up the separate threads as it were, correlate the many facts, and bring to light explanations of many hitherto functional diseases of the heart, that are of surpassing interest. Before I go further into this subject, I want to bring to your attention one book, the product of James Mackenzie. Engaged for twenty years in active practice in a small town in England, he was led to enquire into the cause of pulse irregularity, in order that he might "appraise its value as a diagnostic sign." During these years of patient observation, he never failed to make careful graphic records when opportunity presented. To-day his modestly entitled book, "The Study of the Pulse," stands as a classic in medicine, unequalled in any language for its completeness, genuineness, and accuracy.

It will be appropriate at this time to recall some of the accepted theories of heart beat, and explain the forms of normal, radial, and jugular pulse. We must consider the heart as a muscular organ living in the body, under its own automatic influence. It is in itself capable of rhythmic activity, and whether or not it contains a nervous center in its own muscular structure, it has no center in the medulla. True it is susceptible to vagus and accelerator influences, but when these are paralyzed or cut, rhythmic contractions of the heart do not cease. Hence we look upon these nerves to have a moderator influence only. Normal functional activity therefore residing in the heart muscle, can be influenced as far as the intracardiac mechanism is concerned in four ways. These, Engleman explains admirably as follows: (1) The rate of stimulation that produces heart beat may change; (2) The heart muscle may become more or less irritable to stimuli; (3) The contractile power of the heart muscle may be affected; (4) The conduction paths from sinus to auricle to ventricle may be altered. Let some pathological

influence, positive or negative, affect one of these four means of regulation, and an arhythmia results.

The most commonly seen cardiac arhythmia is familiar to all. It is that irregularity of the pulse that occurs during respiration. It is seen most frequently in young people when, during deep inspiration, there is a gradual shortening of the pulse period, whereas lengthening occurs during expiration. Suspension of breathing may also bring it on. Exaggerated respiration causing an increase of pulse rate, is the only condition under which it normally appears. In its clinical aspect it points distinctly to an irritability of the nervous mechanism of the heart, especially of the extracardiac nerves. Atropin, to which children are more irritable, removes it. This fact in itself points to some disturbance of the vagus inhibitory tone. Respiratory irregularity is seen most marked clinically in basilar meningitis, in convalescence from protracted fevers, in neurasthenia and following prolonged use of drugs that affect the extracardiac mechanism. It always points to some instability on the part of the vagus, but is in itself no cause for alarm.

The next most frequently seen irregularity, differs from the first in that it arises in all cases from an intracardiac condition. It is termed extra-systole; also premature systole. In general the term signifies a contraction of the ventricle before the time of regular systole. Such a contraction may occur at rare intervals, i. e., sporadically; it may occur regularly, giving the sensation to the palpating finger of grouped beats, or the pulsations may occur successively, inaugurating a tachycardiac. It is evident that extrasystole must occur at some time during the diastolic phase of the ventricle. If it occurs very early in diastole there may not be enough blood in the ventricle, and the contraction may at some time be so weak that the aortic

valve cannot be opened against the high pressure in the aorta, and no pulsation reaches the arteries. Then the next regular beat of the heart is missed, because the ventricle is in complete contraction, at the time when the regular systole should occur. The result to the palpating finger is a missed or dropped beat. This is a common occurrence and explains a phenomenon we all have frequently observed. If many of these occur in succession a slow pulse results, and we have a bradycardia due to extrasystoles. An extrasystole occurring a little later in the diastolic phase will send a small column of blood into the arterial tree. We recognize this clinically by a large, followed by a small pulsation, although in many instances the time irregularity is not discerned. Then, just as in the previous instance, the next regular beat does not materialize. Should extrasystoles occur in marked rhythm, resulting in a pause each time following the extrasystole, a bi- up to a polygeminal pulse results. That form of extrasystole, which causes a tachycardia, is due to a series of interpolated extrasystoles. Hering first demonstrated this in 1900, and since then other observers have proven that it may result as described. Most patients possessing some form of extrasystole are unaware of the presence of this condition. Sporadically occurring cases of extrasystole have no clinical import. Others, however, come to us complaining of the sensation of the heart trembling, or pounding, or stopping. If in these cases we detect a bradycardia, or a cluster of extrasystoles, or a geminal pulse, it is a sign that some abnormal stimulus is at work in the heart muscle. That it is in the heart muscle can be proven by giving atropin, and paralyzing the vagus.

What is the nature then of these stimuli that cause extrasystole? No form of irritation of the extracardiac mechanism will produce them. It is believed that they are either of a mechanical or a bio-

chemical nature. We know that any mechanical irritation to the heart will arouse extrasystole. The prolonged use of certain drugs, or the absorption of toxic substances will give rise to them. Hence several arbitrary divisions have been made on the basis of the etiology, but these are of little value. We find extrasystole in organic heart disease, probably due to mechanical causes; we see it often following severe fevers, and here it is of serious import; we meet with it in general conditions, such as constipation, diarrhea, gastritis; finally a large group of patients suffering from myocardial, or arterial changes resulting in hypertension and vascular derangements are prone to develop extrasystole.

In this connection pulsus alternans may best be mentioned. It consists of a large, followed by a smaller beat in regular rhythm. Though at first associated with extrasystole from its resemblance to the bigeminal pulse, it is in reality different. In many cases it resembles a dicrotism. Experimental observations have shown it to be due to changes in the contractility of the heart muscle, the power of contraction failing to return completely after each full beat. MacKenzie found it present in all cases of angina pectoris, but it is also found, and most exclusively so in cases of high blood pressure, and arteriosclerosis. In one case which I shall show later it occurred in cardiac incompenation with nephritis.

A group of clinical symptoms first noted by Stokes, and later more fully observed by Adams, has interested many investigators for many decades. (1) Slow pulse varying from 10 to even 5 beats per minute; (2) attacks of giddiness, vertigo, syncope, and apoplectic or epileptoid seizures; (3) marked venous pulse in the veins of the neck, that do not correspond in rate to the slow apex beat; (4) dyspnea; (5) cyanosis,—these prominent features form the syndrome commonly known as Stokes-Adams disease,

in recent years more properly termed heartblock. The distinct relationship that exists between the auricles and ventricles, has long been a subject for investigation, and the opposing views of conductivity by nerve and by muscle have given physiologists much food for discussion. The early neurogenic theories of Volkmann have in general given way to the myogenic of Gaskell and Engelman. Four years ago another chapter was added to cardiac physiology when the younger His explained the remarkable bundle of fibers about 18 mm. long, 2.5 mm. wide, and 1.5 mm. thick, that begins in the septum of the auricles below the foramen ovale, runs downward, and forward through the fibrous triangle of the auriculo-ventricular junction, and then divides into two limbs which pass down along the ventricular septum. Each part branching, grows gradually thinner, finally merging into the muscle fibers of the heart. More recent work has described two nodes,—one in the situation of His' bundle in the fibrous septum called the auriculoventricular node, and the other an upward continuation of the bundle situated at the junction of the great veins and auricle, named the sinus-auricular node. Many views as to the nature of this interesting bundle have been expressed. The most recent of Tawara, Erlanger, Gaskell, and Keith consider it as a group of finely interlacing conducting fibers, poor in sarcoplasm, beginning in the muscular structure of the great veins, and uniting into a bundle at the sinusauricular node, traversing the heart as described and terminating in many ramifications as the fibers of Purkinje in the muscle cells of the ventricle. It is this system of fibers that transmits stimuli from auricle to ventricle and vice versa; it is this system that has a moderator effect on the ventricles, just such a one as the vagus exercises solely on the auricles; and it is this same bundle that, with the aid of the vagus, regulates heart

beat so that under normal conditions the interval between auricular and ventricular systole is about one-fifth of a second. If however a lesion occurs in this conducting or rather concurring path, one that prevents a free passage of stimuli from sinus to auricle to ventricle, this one-fifth second interval will be prolonged, and the ventricle will beat at a separate rate from the auricle. In other words the ventricle will assume a rhythm of its own. That this is possible follows from the interesting observation of Gaskell, who found that isolated strips of heart muscle under proper conditions will contract in a rhythmical manner of their own accord. Therefore when a lesion of the bundle of His occurs, completely blocking the passage of all auricular stimuli to the ventricle, complete heart block occurs. Under such conditions, while the auricle may beat 72 times to the minute, the ventricle may contract but 24 times, or a 3 to 1 rhythm follows. If, however, the blocking is incomplete, a few of the stimuli may pass through, giving us a partial heart block. Erlanger's beautiful experiments, though familiar to most of you, bear repeating here. Briefly, by an ingenious clamp he caught up the bundle of His in the exposed heart of a dog. Slight compression blocked some of the auricular impulses, further compression cut more off, till tight clamping entirely blocked all conduction, and the auricles and ventricles beat with independent rhythm. It is evident that the result of heart-block is slow pulse, and at times this pulse becomes so slow that many seconds elapse between successive beats. At these times when the blood is not being properly sent through the arterial system and the venous channels become filled, due to the stasis beyond, attacks of vertigo may occur, or syncope may follow, or at times epileptiform seizures result. At the same time cyanosis and dyspnea are present. Bradycardia, cerebral attacks, marked venous pulse in

the neck, cyanosis and dyspnea,—here we have the explanation of that remarkable clinical syndrome of Stokes-Adams disease or heart block. Since these fascinating experiments have disclosed the pathology of the whole subject, numerous clinical records substantiating these views have found their way into the literature. Sclerosis of the bundle of His in some part of its course has been frequently found; gummata are at times the cause of the block; marked alcoholic excesses, and infectious diseases, resulting in myocardial degeneration have been reported. Lately Schreiber described a case determined by emotion. At present I have a similar case under close observation.

The treatment of slow pulse has received but little attention. This is so often unfortunately the case when pathology, in a new field of investigation, is the all absorbing topic. Certain practical lessons have already been learned. First of all the administration of digitalis is fraught with danger. MacKenzie has shown that by prescribing doses of digitalis in the case of a susceptible myocardium, heart-block may result. It is supposed that the drug has an especial action on the auriculoventricular bundle of His; clinically such cases have been seen. In cases with a syphilitic history anti-specific treatment is certainly indicated. In a few instances patients have entirely recovered. The iodides should be administered in all cases, firstly, because in a recent report of a fatal case of heart-block, a gumma was found in the septum, though the patient gave no history or sign of syphilis; secondly, because the iodides tend to diminish tension in sclerosis and hypertension. Caffein and camphor have been found of service when injected hypodermically, the former augmenting the contractibility of the ventricles, through direct action on the heart muscle, the latter increasing the irritability of the heart muscle. General meas-

ures of rest, diet, bathing, and quiet must be enforced, for in these patients departure from the simple life may bring on a fatal seizure.

Of all the cardiac irregularities tachycardia presents some of the most perplexing problems. Rapid heart may result from a variety of causes, but depending on its origin and manifestations, it practically divides itself into two distinct types, the simple and the paroxysmal. Simple tachycardia occurs especially after violent exercises, in fevers, in cardiac incompensation, in Basedow's disease, and in atropin poisoning. In these the subjective sensations of palpitation, precordial distress and anxiety may or may not be present. The tachycardia has been variously explained by a (1) toxic stimulation of the accelerators, (2) by destruction of the vagus, (3) by an attempt on the heart to maintain normal blood pressure. In this condition we have a rapid pulse that steadily climbs from the normal to any degree of rapidity, and one which may vary its rate at any time by any number of pulsations per minute. In the paroxysmal type we are dealing with an entirely different form of tachycardia. In this the characteristic sign is a doubling or a double-doubling of the normal rate, the attack coming on with comparative suddenness and terminating with equal abruptness. It is never accompanied by a gradual increase in beats, nor does it ever end by a slow decline of the pulse rate. Its maximum is always a multiple of the normal. The etiology is unknown, though the predisposing causes are many. I have seen it in advanced tuberculosis, in arteriosclerosis, in valvular disease, and in a case of dilated stomach with distension. Hirschfelder's case appeared in an old man with marked arteriosclerosis. The history showed the condition to be of twenty years standing. Hewlett's case was in an alcoholic. Schlessinger reports a case in a woman of fifty years suffering

from tachycardia as a result of excessive use of tobacco. Rihl has seen it in individuals addicted to the use of coffee. Hoffman reports cases after some fright or strain. In a case of carcinoma of the lungs, MacKenzie found an interesting example of it. Rheinhold reports a case of it in syphilitic basilar meningitis. As a rule premonitory symptoms usher in an attack. There is a sensation of fear or anxiety, unpleasant sensations of nausea, tingling, darting, or buzzing are felt. The patient often trembles, and may even shake violently, as in a severe pneumonic chill. There may be headache, giddiness, and even unconsciousness. Some observers have witnessed epileptoid attacks in connection. Clarke recently reported two such cases, one of which was a woman who, following a severe influenza, was stricken with these seizures of tachycardia, when she left her bed she would fall unconscious, her eyes cross, and her muscles become rigid, but she would quickly recover from both unconsciousness and tachycardia, when in the recumbent position.

Besides the definite ratio of doubling or double-doubling of the rate, other symptoms are present, depending on the severity of the tachycardia, and the length of time it persists. The reduction of the blood pressure comes immediately. Soon after a position venous pulse is seen in the jugular. Presently the right heart dilates, and a tricuspid insufficiency ensues. If the attack persists, other signs of an uncompensated right heart follow,—marked venous pulse (of ventricular type), edema of the ankles, enlargement of the liver and stomach symptoms. The evil results of this tricuspid uncompensation only become dangerous after the attack has persisted some time. Many explanations have been advanced to account for these extraordinary phenomena. The first advanced was that of an extrasystole, interpolated between two regularly occurring systoles. This made the

tachycardia of distinctly ventricular origin. Schmoll has produced tracings lately to substantiate such a view. MacKenzie has sought to explain it upon the basis of extra-systoles, saying that the positive venous pulse during the attack bears this out. But if we consider that there is always a distinct doubling or quadrupling of the rate, and that with the lessened output of the ventricles, stasis in the right chambers causes a dilation of the right auricle with a tricuspid incompetency, the presence of this venous pulse is readily accounted for. Hoffman and Hirschfelder have given exceptional tracings in which a distinct tracing from the jugular gives an auricular contraction preceding each ventricular contraction. Further during periods of return to normal rhythm of the ventricle, the auricle maintained its rapid rate. This fact is most important in explaining paroxysmal tachycardia. In mammals it has long been shown that under certain conditions, if rapid rhythmic stimuli are sent into the sinus, they are quickly transmitted to the auricle, and then to the ventricle, if the inhibitory vagus influence is removed, or if the irritability of the heart is increased. In response to such rapid stimuli in the sinus, only alternate shocks are responded to in many instances. This may be because (1) the irritability of the heart muscles lessened after each contraction, and has no time to recover, or (2) the contractility of the heart muscle itself is slow to readjust itself to meet the next stimulus, or (3) there is a sino-auricular, or auriculo-ventricular block. With these facts in mind it can be seen that stimuli arising in the sinus, where all heart beats begin, may be rapid normally, but only every other one may be responded to. But when certain toxic substances, or nervous influences set up the rapid stimulation in the sinus, and the vagus is paralyzed, and the heart muscle transmits every stimulus, then tachycardia results. But this question is far from settled and

arguments can be brought against every explanation so far advanced. What we need is more careful observations, and accurate jugular tracings in cases of tachycardia, preceding, during and after the attacks. To treat this form of arrhythmia many methods have been employed. Such patients should lead a quiet life, guarded from hard work, nervous influences, and such excitement which might induce hysterical or nervous attacks. Tobacco, coffee, alcohol, and all excesses must be prohibited. Reflex disturbances, dilated stomach, constipation, et cetera, must be treated. Almost every drug that affects the intra- or extracardiac mechanism has been employed, but I feel sure that they all hark back to their immediate or reflex action as stimulators of the vagus. Pressure in the course of the vagus in the neck, galvanism, deep inspiration, ice bag, digitalis, strychnia, and aconite for its sure stimulating effect on the vagus, may all be tried in these cases. In my few cases I have always found that morphin soon cuts short the attack, whether it acts as a nerve sedative, decreases the irritability of the accelerators, or diminishes muscle con-

ductivity cannot be definitely stated. Suffice to say that its employment during paroxysms, and treatment directed toward a suspected etiology is a rational plan to pursue. The outlook for these cases is not good as a rule, especially when these attacks occur with increasing frequency and become more prolonged each time. Cardiac incompensation follows, the patients become bedridden, and usually die of some complication or collapse due to cardiac asthenia.

There are other forms of cardiac arrhythmias that I have not discussed here, because of their rarity, and the uncertain knowledge of their cause and origin. I have purposely omitted these irregularities that result from cardiac incompetency following the valvular insufficiencies. They have a totally different origin and do not enter into the discussion in this field of cardiac pathology. No branch in medicine offers a more fascinating and ever widening field for clinical investigation, and for careful diagnosis than the one I have brought to your attention. By careful graphic records alone can the subject be studied.

Medicine is a noble art to study, and its practice is certainly elevating; but, when even a bare living is not realized from it, it certainly becomes very depressing.

The management of skin diseases is perhaps as essential as their treatment. The proper diet takes first place among these measures and the avoidance of all those external as well as internal irritating influences of any nature is a very good adjuvant.

Physicians must be on the alert more than ever, in view of the fact that so many diseases of the tropics are brought to this country by soldiers who have served in our island possessions. This is especially true of skin diseases which, at first, appear so puzzling.

When an eruption is in the form of red or scarlet spots, streaks or small papules, no matter where located on the surface of the skin, pass the finger over it. If it remains unaltered you most probably have a case of purpura hemorrhagica.

If the skin itches first look for parasites, animal or vegetable. If neither be present examine carefully to determine what the disease is and then to find its cause. The treatment will easily suggest itself.

In all cases of mycotic diseases of the skin it is better and more certain to make a microscopic examination. The necessary dexterity to prepare the specimen and mount it properly is easily acquired, the only difficult part being the quick detection and recognition of the fungus.—*Am. J. Derm.*

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

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OCTOBER

Editorial

Honesty and Business Integrity in Those Who Supply Physicians With Drugs. A third great work which the American Medical Association has taken up and a feature which markedly characterizes the new era of medicine, is that which has for its object the safeguarding of the physician in his use of medicines and other supplies, by keeping him informed regarding the difference between labels and contents. So much has been written concerning the work of the Council on Pharmacy that it is superfluous to review here the splendid reports which have been from time to time published. The council has, naturally, been bitterly attacked, but it is difficult to conceive how any physician, not connected with the proprietary medical interests or with medical journals whose life blood they are, can for a moment, fail to appreciate what this movement has done for him or be backward in giving it his hearty support.

The history of the establishment of the Council on Pharmacy is interesting. In 1900 a proposition was made to create a body to be called a Board of Control, to be composed of pharmacists and chemists, which should pass on all advertisements of medicines offered to the *Journal of the American Medical Association*, but at that time the plan was not

considered feasible. It is to the glory of our own state society that it took the initiative in again bringing up the idea. At our annual meeting held in Grand Rapids, in May, 1904, the following resolutions were passed:

Whereas, an exact knowledge of the composition and properties of substances used in the management of disease is essential to a physician's best success;

Whereas, commercial push, by advertisements and drummers, persuades many physicians (often the very elect) to use and commend drugs, mineral waters, artificial foods, etc., etc., of unknown composition and effects;

Whereas, as it is impossible for the individual physician to verify the statements of the sales agents, to separate fact from fancy, he often uses substances quite unlike those indicated, to the discredit of himself and his art;

Whereas, the American Medical Association was organized to promote the exact knowledge and intelligence of its members;

Resolved, that the Board of Trustees, A. M. A., is hereby instructed to provide for the analysis of medicinal substances of unknown composition and undetermined effects and to promptly publish the results in the Association Journal.

Resolved, that the Board of Trustees, A. M. A., be instructed to appoint a "Journal Clearing House Commission," three in number, to serve without salary, with the authority to employ one or more experts, and to equip a suitable laboratory, at a yearly expense not to exceed five thousand dollars."

These resolutions were presented to the House of Delegates of the A. M. A., at its meeting in Atlantic City the following month, and were rejected. At the meeting, however, of the Board of Trustees, held in February, 1905, they were again considered. To quote from the report of the board: "After giving the matter full consideration, the Board tentatively created a body to be called the Council on Pharmacy and Chemistry of the American Medical Association, combining in this the principle recommended by the Michigan State Medical

Society with that underlying the proposition to create a 'Board of Control' five years ago."

It is now three and one-half years since the Council began its work and during this time probably 500 articles have been investigated, something over 300 of which have been found to conform to reasonable rules and have been put upon the approved list.

We may rest assured that no honest preparation will suffer at the hands of the Council. All it seeks to determine is: Is the preparation honest? Is its composition what its proprietors claim it to be? Are the statements made by the proprietors in reference to the preparation at variance with the facts?

Every physician who wishes to prescribe intelligently and honestly should have at hand copies both of "The Propaganda for Reform in Proprietary Remedies" and "New and Non-Official Remedies." They may be obtained by writing the American Medical Association, 103 Dearborn avenue, Chicago.



Recompense for Cows Slaughtered on Account of Tuberculosis. An opportunity offers this fall for medical societies and individual practitioners to further some much needed legislation. Every physician understands the desirability of eliminating tuberculosis in dairy cattle, but few, perhaps, are aware of the reason why progress along this line has been so very slow in Michigan. Our sanitary authorities are not lacking in enterprise and ability, nor our dairymen in intelligence, and it may seem surprising that no active measures are being carried out on the part of either to mitigate what all know to be a serious evil. The trouble lies in the fact that our statutes, unlike the more enlightened ones of New York, Pennsylvania and Minnesota, for instance, do not offer to the

owner any adequate compensation for animals slaughtered because of tubercular infection. It is common knowledge that cattle with localized tuberculosis, or even with fairly well advanced pulmonary disease, are often healthy looking and good milk producers. Furthermore, if the disease once gets a good start in a herd, it is not uncommon for almost every cow to be infected. The only satisfactory test for tuberculosis in cattle is the use of tuberculin, yet every dairyman nowadays knows that many animals with localized or healed lesions, and a few with no discoverable lesions whatever, will react to it. Under these circumstances it is not at all surprising that the owner of a herd of good milch cows should be unwilling to subject them to the tuberculin test and face the possibility of having most of them slaughtered, as the law requires if they react, and thereby suffering a serious financial loss, for which he can get no recompense. It is true that it is to the interest of cattle owners to get rid of tuberculous cattle; but it is still more to the interest of the community at large, and it is only fair that it should bear the greater part of the expense involved. The statutes of the states above mentioned provide for appraisal of all cattle before the application of the test, and remuneration of the owner for slaughtered animals on a scale varying according to conditions found post mortem. Experience has shown that the owners of herds are glad to avail themselves of the opportunity thus given to get rid of infected animals.

Some sanitarians and physicians in Michigan who are interested in this subject have joined with influential men allied with the dairy interests in an effort to secure the passage in this state of a statute similar to those of New York and Minnesota, and a bill drafted by men thoroughly conversant with all phases of the situation will be introduced in the coming session of the legislature. It seems probable that it can be

carried; but some educational work will be necessary, and it is hoped that medical societies and physicians through the state will use their powers of persuasion upon members of the legislature and candidates for membership as to the great desirability of such a law.



Recreation for physicians is sometimes thought to be fraught with great difficulty, not to say danger to their reputation and dignity. The old-time doctors and many of the modern profession hesitate to go away on a vacation, for fear of losing practice or being criticized for inattention to duty. There is, however, a growing class of physicians who recognize the necessity of recreation and make it a point to create opportunity for it. We often hear a practitioner claim that he is so busy that he cannot get away; this is because he is either insincere or doesn't know how. Obstetric cases cause the greatest obstacle to vacations, but if a man desires, he can plan his vacation in advance and decline confinements likely to occur in that time. If he is tactful and firm in his refusal, he will be more respected, rather than less. If, in seeking recreation, a man retain his dignity, it is very likely that people will have a greater regard for him because of the very fact that he is able and independent enough to leave his practice.

It is undeniable that a physician ordinarily is benefitted by change of scene and occupation. The man who does not get away from work every year or two is in danger of "going stale" physically or mentally, or of being easy prey to illness, or becoming narrow in his outlook. He loses chances for the humanizing influence of contact with new people, places, and things.

It makes no difference whether a man lives in the city or the country, he is

helped by a judicious amount of recreation. In the city, a physician has the opportunity for recreation snatched in spare hours, day by day, such as the theater, concerts, clubs, casinos, amusement parks, or various outdoor pastimes, as golf, tennis, boating, driving, baseball games, etc. In the country the means of diversion are less varied, but rural life on the other hand is more healthful, if less broadening.

It is of great value if a man has a hobby, which will occupy his mind when his professional duties are over; some men enjoy literary pursuits, others take to mechanical work, others to nature study, or to music and other arts. In fact, hobbies of physicians can be multiplied *ad infinitum*.

Occasionally a physician attains fame in his hobby; for instance, S. Weir Mitchell is a distinguished novelist; Billroth was renowned for his ability as a pianist. In Boston there has been a vocal organization composed of and conducted by physicians, who gave performances at certain medical gatherings.

It is not necessary to dwell upon the advantage of outdoor air and physical exercise to physicians, because they lead active lives, which take them much into the open air and change of scene. Many of the younger men, nevertheless, supplement this routine activity with regular exercise at golf, yachting, tennis, automobilng, handball, squash, racquets, curling, bowls, skating, cricket, etc. It is a thing to be encouraged, as is recognized by large hospitals, where modern management includes provision for athletic recreation for the internes.

Vacations may be spent in many ways, but probably two resources are most popular with doctors. One is to get away in the woods for camping, fishing, hunting, or simple relaxation. The other is to travel, including or not the visits to clinics, post-graduate courses, and other educational institutions. The object of a vacation is not always of neces-

sity to play; the same purpose is accomplished with men of certain disposition by a mere change of work, or work in new surroundings, with freedom from the ordinary worries of practice.

The point to be emphasized is that recreation is necessary; if it is not scattered along continuously in one's life, it should be taken in a lump by means of a vacation. A well-balanced man will desire to leave a change; he should recognize the desire and lay plans to satisfy it periodically, and by so doing he will return to his work with broader outlook, renewed interest, and the undiminished respect of his clientele.



New Appointments. President Lawbaugh has appointed Dr. L. J. Hirschman, of Detroit, to fill the unexpired term of Dr. George Dock, as councilor of the first district.

A new Committee on Tuberculosis has been appointed as follows: Dr. H. J. Hartz, Detroit, chairman; Dr. Collins H. Johnston, Grand Rapids; Drs. E. L. Shurly and P. M. Hickey, Detroit; A. S. Warthin, Ann Arbor; A. W. Crane, Kalamazoo; F. McD. Harkin, Marquette.

The Committee to Study the Subject of Medical Defense consists of Dr. F. B. Tibbals, Detroit; Drs. A. M. Hume, Owosso; A. H. Rockwell, Kalamazoo; W. J. Dubois, Grand Rapids, and H. A. Hornbogen, Marquette.

Dr. E. T. Abrams, Dollar Boy, is the new member of the Committee on Legislation and Public Policy.

Dr. Flemming Carrow, Detroit, is the new member of the Committee on Medical Education.

Book Notices

Treatment of Internal Disease for Physicians and Students. By Dr. Norbert Ortner, of the University of Vienna. Edited by Nathaniel Bowditch Potter, M. D., Visiting Physician to the New York City Hospital. Translated by Frederick H. Bartlett, M. D., from the fourth German Edition. Cloth: pp. 658. Price \$5.00. J. B. Lippincott, Philadelphia, 1908.

This volume is a translation from the last, the fourth edition, of Ortner's Lectures upon the "Therapy of Internal Disease." As the title indicates, it is devoted to treatment. Very little is said concerning prophylaxis and only such reference is made to the pathological physiology of disease as the author considers essential to rational treatment. Special stress is laid upon mechanical, dietetic, climatic, hydro-therapeutic and other extra medical measures. There is more than the usual discussion of the applicability of drugs, as the author says, "with the hope of making medication less an affair of memory and more of reason." The number and variety of drugs, especially the newer German synthetics, shows that the author is no therapeutic nihilist. The reviewer's one criticism is upon the profusion of prescriptions and the apparent perfect trust in so many drugs.

The prescriptions have been altered to conform to the American pharmacopeia, and the equivalents in the English scale of measures have been added to the metric quantities. References in climatology, hygiene, and dietetics have been adapted to the local needs. There is a classification of mineral waters to which has been added tables of corresponding American waters. The criticisms and suggestions by the editor are sufficient.

This volume is not a text book, but contains much that is well suited to assist the practitioner in working out the details of symptomatic treatment.

Diseases of the Intestines and Peritoneum. By Dr. Herrmann Nothnagel, of Vienna. Edited, with additions, by H. D. Rolleston, M. D., F. R. C. P., Physician to St. George's Hospital, London, England. Second Edition. Octavo of 1059 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1907. Cloth, \$5.00 net.

Few translations of German medical books have been more generally satisfactory than the series comprising Nothnagel's System. Twelve

of these volumes are now available in English; several are in the second edition. The fact that the various volumes may be purchased separately has made them especially popular.

In 1904 appeared Rolleston's translation of the section on "Diseases of the Intestines and Peritoneum." It was immediately accepted as the most complete monograph on the subject and its large sale made a second edition necessary. This opportunity has been taken to bring the work up to date, involving considerable additions to the text.

The book is a large one comprising over 1,000 pages, is printed on excellent paper and beautifully bound. The arrangement of the text is logical; reference is easy, made so by the arrangement and the excellent index. Throughout are many practical points on diagnosis and treatment as well as complete sections on etiology and pathology.

This second edition is even better than the first and is to be highly recommended.

Mortality Statistics, 1906. Department of Commerce and Labor, Bureau of the Census, S. N. D. North, Director. Washington, Government Printing Office, 1908.

This volume deserves special notice. We are too prone to accept the official reports of our government employees as a matter of course and fail to give them credit for the painstaking work which they do. This report is the work of Dr. Cressy L. Wilbur, Chief Statistician for Vital Statistics, formerly of Lansing and still a member of our state society. Dr. Wilbur is struggling against enormous difficulties, but is, nevertheless, making great progress in his campaign toward accurate vital statistics.

The scope and limitations of the work are thus stated by the author:

"It is especially undesirable that invidious comparisons should be made, on the basis of crude death rates alone, whereby a certain city or state is proclaimed the 'healthiest' of any in a selected list. Carefully 'corrected' rates are necessary for satisfactory comparisons, and many elements of 'healthfulness' are involved that are quite incapable of expression in a single rate number. With all these limitations, however, the general rates given for the various states and cities have the merit of being obtained in a uniform manner, without elimination of various

classes of deaths as often happens in municipal, and even in state reports, and upon a uniformly estimated basis of population; so that for general investigations of mortality, and especially for the study of the movement of disease in any locality from year to year, they will prove to be more satisfactory than any data that have been heretofore at the service of American sanitarians."

According to this report deaths from cancer are increasing with amazing rapidity. The number in the registration area rose from 20,847 in 1902 to 29,020 in 1906. Diseases of the kidney rose from 29,219 to 40,933 in the same period and deaths from apoplexy and paralysis from 28,536 to 36,367. It is pleasant to know that pneumonia which has shown an apparent increase for some time, has begun to decrease, the rate having fallen from 124.5 per 100,000 living in 1902 to 110.8 in 1906. There were in 1906 4,673 deaths from appendicitis but this was less than the preceding year.

Books Received.

A Practical Guide to the Examination of the Ear. By Selden Spencer, instructor in Otology in Washington University. 5½x7½ in., 66 pages. C. V. Mosby Medical Book and Publishing Co., St. Louis, 1908.

Health and Beauty. By John V. Shoemaker, LL. D., M. D., Professor of Materia Medica in the Medico-Chirurgical College of Philadelphia. 6½x9 in.; 476 pages. Cloth, \$3.00 net. F. A. Davis Company, Philadelphia, 1908.

The Cure of Rupture by Paraffin Injections. By Charles C. Miller, M. D. 5x7 in.; 81 pages. Cloth, \$1.00. Published by the author, Chicago, 1908.

History of the Medical Society of the State of New York. By James F. Walsh, M. D., LL. D. 5½x9 in.; 208 pages. Published by the Society, 1908.

County Society News

Third District.

The annual meeting of the Third Councilor District was held in Battle Creek on October 6th. The scientific session, held in the afternoon, was

followed by a banquet. The officers chosen for the meeting were: Councilor, W. H. Haughey; chairman, Samuel Schultz, Coldwater; secretary, George C. Hafford, Albion; assistant secretary and chairman of the committee of arrangements, Wilfred Haughey, Battle Creek; committee of arrangements, C. E. Stewart, H. A. Powers, A. S. Kimball, Battle Creek; S. Schultz, Coldwater; L. L. Cahill, Mendon; A. H. Burleson, Olivet.

A complete report of the meeting will appear in the next issue of THE JOURNAL.

Livingston.

The annual meeting of the Livingston County Medical Society occurred on September 15, 1908. Dr. W. M. Donald, of Detroit, read a paper on "Vascular Degeneration," which brought out an excellent and helpful discussion.

The officers elected were: President, H. F. Sigler, Pinckney; vice-president, Jeanette Brigham, Howell; secretary-treasurer, R. H. Baird, Howell; directors, J. E. Browne, Howell; J. A. McGarragh, Fowlerville; H. W. Hodges, Brighton; C. B. Erwin, Hartland; M. H. Coan, Brighton.

R. H. BAIRD, *Sec'y*.

St. Joseph.

St. Joseph County Medical Society held a regular meeting at Three Rivers September 3rd, 1908. Meeting was called to order by President L. K. Slote, of Constantine, promptly at 2 p. m.

Dr. W. H. Haughey, Battle Creek, District Councilor, was present and gave an interesting and encouraging talk.

The principal papers presented were Ochsner's Treatment for Appendicitis, The Calmette Test, and Suppurative Peritonitis. The subjects were well and earnestly discussed.

A committee, Dr. F. W. Clements, chairman, gave a report of the results of investigations made, relative to a common price-schedule for St. Joseph County, which was favorably received. The committee was instructed to continue the work and give a final report at the next meeting, which will be held at Sturgis, Tuesday, November 3rd, 1908.

L. L. CAHILL, *Sec'y*.

News

Dr. Max Ballin, of Detroit, has gone to Europe for a month.

Dr. C. D. Aaron, Dr. F. L. Newman, Dr. T. A. McGraw, Jr., Florence Huson, Dr. Jeanne Vernier, and Dr. W. E. Keane, of Detroit, have returned from European trips.

Dr. W. J. Wilson, of Detroit, and Dr. J. P. MacCarthy, of Kalamazoo, have been attending summer courses in medicine at Harvard Medical School.

The Hal C. Blair Hospital at Morenci was opened in July.

Dr. J. D. Crum has been appointed a member of the school board of Owosso; Dr. R. E. Skinner has been appointed to a similar position in Howell.

Dr. W. H. Sawyer's residence in Hillsdale was recently damaged considerably by fire.

Dr. Albert H. Eber, of St. Clair, has returned from P. I., where he has been in the U. S. service for three years.

The postoffice, drug and general store owned by Dr. L. C. Knight, of Riga, was recently destroyed by a fire that devastated a large part of the village.

Dr. W. H. Stevens, of Crystal Falls, has moved to Stambaugh.

Dr. Lehman, of Riga, has moved to Troy.

The Wayne County Medical Society and the Detroit Academy of Medicine have resumed their meetings, the former weekly, and the latter bi-weekly.

Dr. Herbert M. Rich is chairman of the Program Committee of the Wayne County Medical Society.

The Detroit College of Medicine began its 1908-09 session on Sept. 16th.

Dr. Jean C. Vernier and Dr. Minta P. Kemp, both of Detroit, spent their vacation traveling together in Europe.

Dr. J. D. Crum has been elected a member of the school board of Owosso.

St. Mary's Hospital, of Detroit, has established a laboratory for clinical diagnosis and research; the work will be under the supervision of Dr. E. H. Hayward, pathologist to St. Mary's, and Dr. C. S. Oakman, director of the Laboratory of Clinical Diagnosis of the Detroit College of Medicine.

Dr. A. B. McGregor has left Fowlerville and located in Aberdeen, Washington.

Dr. R. W. Kennedy, Superintendent of the State Hospital for Tuberculosis at Howell, has been granted a three months' leave of absence.

A dozen intimate friends of Dr. George Dock tendered him a farewell dinner in Detroit on September 14th. Dr. A. S. Warthin entertained in his honor at Ann Arbor on the evening of the 17th. Doctor Dock left to take up his new duties at Tulane University, New Orleans, September 20th.

Dr. Johann Flinterman has returned to Detroit after five months spent in Germany. A greater part of the time Dr. Flinterman was at Leipsig, where he daily attended clinics.

Dr. Walter Hewlett has been elected by the Regents to the Professorship of Medicine at the University, made vacant by the resignation of Dr. Dock. Doctor Hewlett obtained his A.B. at the University of California, did post graduate work at the University of Chicago and graduated in medicine at the Johns Hopkins Medical School. For two years he was with Krehl, later becoming Associate Professor of Medicine at Cooper Medical College in San Francisco.

The Milk Commission of the Kent County Medical Society, which has so successfully secured the establishment of a certified milk plant in the city, is composed of the following doctors: Dr. Collins H. Johnston, Chairman; Dr. W. H. Veenboer, Secretary and Bacteriologist; Drs. J. A. McColl, T. M. Koon and R. H. Spencer. The Sanitary Milk Co., of Grand Rapids, has sold what has been purported to be "certified milk" for the last two or three years, and charged 12c per quart for it. A number of samples of this milk have been examined by the Commission the past summer and have been found to contain from 100,000 to 400,000 bacteria to the cubic centimeter, while the limit of the Commission is 10,000. The Commission has, therefore, requested the Sanitary Company to discontinue the use of the word "certified," and intends to introduce a bill at the

coming session of the State Legislature, making such use of the word unlawful. In the states of Kentucky and New York, the term "certified" can be applied only to such milk as has been passed upon by a Medical Milk Commission, supported by a regular medical society in good standing in the state. Such a law is needed in Michigan.

The Medical Department of the University of Michigan began its 1908-1909 session on Sept. 29.

Dr. Eugene Miller has been re-elected to the school board in Battle Creek.

Dr. H. N. Swaney, of Eagle, has sold his property and practice to Dr. Harold Hoover, of Alamo, and will go to California for a year of rest to recuperate his health.

The Grand Rapids Anti-Tuberculosis Society has established a free tuberculosis dispensary, which is open daily from 12 to 1 o'clock, and is run by the following Board of Physicians: Dr. Collins H. Johnston, Chairman; Drs. Ralph H. Spencer, Alden Williams, Thomas M. Koon, John F. Hastie, and A. J. Baker.

Marriages

Daniel O'Brien, M. D., of Lapeer, to Miss Lucy Rickart, of Gaines, at Montrose, August 10.

Deaths

W. E. Best, M. D., formerly of North Branch, died suddenly at his home in Cottage Grove, Ore., July 22.

Samuel E. Gillam, M. D., of St. Johns, died suddenly Aug. 13 from heart disease while fishing in a launch on White Lake, aged 63. Dr. Gillam was an ex-president of the Clinton County Medical Society, a former surgeon of the Detroit, Grand Haven & Milwaukee R. R., and president of the local board of U. S. Pension Examiners.

Gilbert E. Corbin, M. D., a physician and dentist of St. Johns, died at his home Aug. 6, from heart disease, aged 77.

Benjamin Douty Ashton, M. D., of Traverse

City, died at his home, Aug. 6, from cerebral hemorrhage, aged 79.

Dr. Chester S. Gitchell, of Hobart, died at his home, June 26, 1908, from angina pectoris, aged 73.

William T. Eckley, M. D., of Grand Haven, a retired physician, died September 12, from heart disease, aged 53.

Dr. Le Grande Wheeler, an old practitioner of Muskegon county, died at his home in Wolf Lake, aged 76.

Henry A. Dawley, M. D., of Lansing, formerly of Williamston, died recently.

Obituary

George Kinney Johnson, M. D.

Dr. George K. Johnson, President of the Michigan State Medical Society in 1879, died at his home in Grand Rapids, September 3, 1908, aged 86 years. Equipped with gifts, both mental and temperamental, which qualified him to be a leader and at the same time a servant of his fellows, his services to both city, state and country have been such as will not soon be forgotten.

Dr. Johnson was born in Cayuga County, New York, January 17, 1820. He came to Michigan at the age of four, his parents settling in Brighton, Livingston County. The country was new and wild and his boyhood experiences Dr. Johnson always regarded as the most wholesome of his life.

At 18 years of age, Dr. Johnson resolved to get an education. Schools were few in those days and difficulties were great. The university at Ann Arbor was not then in existence, but an old academy known as the McNiel academy, was located in Ann Arbor, and this he attended for two or three years and was there at the time of the laying of the corner stone of the Michigan University.

Having obtained what professional knowledge the school then had to impart, he entered, at the age of 21, the office of Dr. Ira Bingham at Brighton, and began the study of medicine with this teacher. Dr. Bingham was a brusque old bachelor, but well instructed and successful in his practice. He took great pains with the young men whom he admitted into his office.

In March, 1848, Dr. Johnson received his degree in medicine from the Cleveland Medical

College and the following June began his first professional work in Pontiac. In a few years his practice grew to extend over large portions of Oakland county, and in the excess of his labors his health began to fail. In 1852 he moved to Detroit and undertook light practice, but still remained in poor health and in 1856, being unable to continue in the work of his profession, he went to Grand Rapids in the interests of the Detroit & Milwaukee railroad, then in course of construction, and in which some of his friends were largely interested. In 1857 he spent several months in England, partly in pursuit of health and partly in the interest of the road referred to.

Returning to Grand Rapids he became interested in politics and in the spring of 1859 was elected mayor of the city on the Democratic ticket. He served one term, but declined to be again a candidate.

In 1860 Dr. Johnson had so far regained his health that he was again enabled to take up his practice. The following year, however, the civil war broke out and he left home to become surgeon of the First Michigan cavalry. He served with it during the exciting campaign of General Banks in the valley of the Shenandoah and later in the same season he served as medical director of a brigade of cavalry, commanded by Gen. John Buford, in the stirring but unfortunate campaign of General Pope. He was at Second Bull Run, where his intimate friend, Colonel Brodhead, the commander of his regiment, met his death.

In February, 1863, congress created a corps of medical inspectors of the army, with increased rank. It consisted of eight inspectors, four of whom were taken from the regular service and four from the volunteer service. Dr. Johnson was commissioned one of the four from the latter and was at once assigned to duty with the army of the Potomac, and was in service during the campaigns of 1863. He was present at the battles of Chancellorsville, Gettysburg, and others. From 1863 to 1865 he was inspector of the Middle Military Department and as such had the laborious and responsible duty of inspecting field and general hospitals of the large department, extending from Philadelphia to New Berne, N. C.

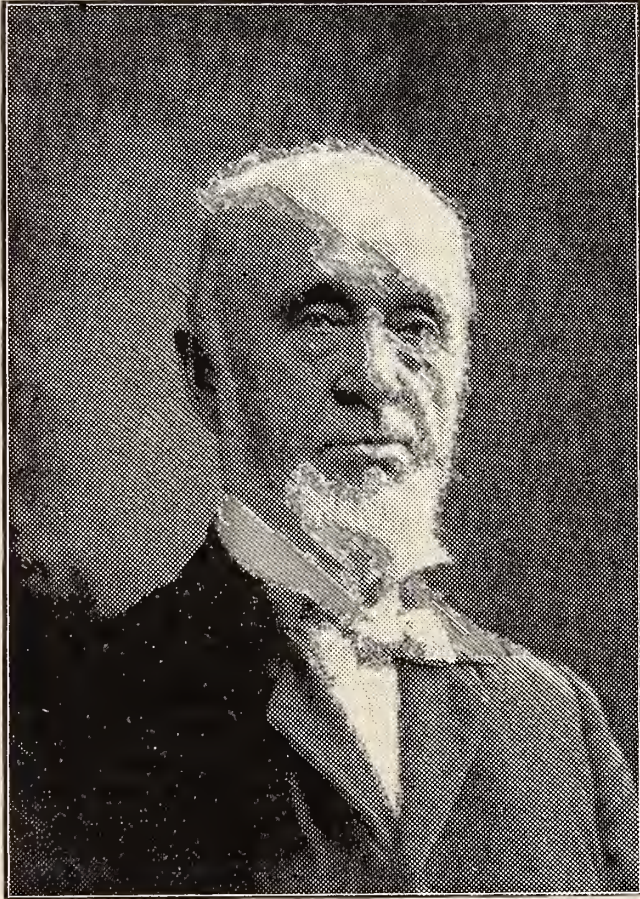
In November, 1865, after a military service of four years and four months, Dr. Johnson returned to Grand Rapids, at once resuming his practice.

For many years Dr. Johnson was active in medical society work, both in the local, state and national organizations. At the time of his death, he was an honorary member of the Kent County Society and of the State Society.

By reason of his army service he held membership in the Society of the Army of the Po-

chief of the staff and consulting surgeon to Butterworth hospital, and was a communicant at St. Mark's church.

In the death of Dr. Johnson, the profession of Grand Rapids and Michigan loses one of its leading members and medical organization one of its staunchest advocates.



George Kinney Johnson, M. D.

tomac and in the Order of the Loyal Legion of America. Dr. Johnson was appointed pension examining surgeon of Grand Rapids shortly after the war, and was the only surgeon on that service in the city until the Grand Rapids board was organized, after which he was president of the board for a number of years. He was also

Resolutions Passed by the Kent County Society.

At a meeting of the Kent County Medical Society, held September 11, 1908, to take action in reference to the death of Dr. George K. Johnson, the following resolutions were adopted:

Whereas, it has pleased Almighty God to take

from among us one who has for many years been a personal friend and who has for more than sixty years been closely identified with the medical, surgical and sanitary history of Grand Rapids, and who has always stood for their uplift, we cannot but place on record our deep sense of loss at his departure and seek to express (if language can express) the bereavement we now feel at the loss of one whom we have so long looked to for counsel and advice.

We sympathize with the members of his bereaved family, that they have been bereft of so gracious and loving a presence, and yet while we sorrow and bow in submission to the will of our gratitude that it was given to Dr. Johnson to round out a longer life of usefulness than is given to most men. We offer a prayer that the membership of Kent County Society and the medical profession at large may emulate the example he has set for us.

..Resolved, that the secretary of the society spread upon the minutes this action and send a copy to the family of the deceased and to our State Journal.

RALPH H. SPENCER,
D. EMMETT WELSH,
F. J. LEE,

Committee.

A true Copy:

F. C. WARNSHUIS, Secretary.

Correspondence.

Benton Harbor, September 17, 1908.

To the Editor:—

I wish to tell the readers of THE JOURNAL a little story and ask the ideas of any who may feel themselves able and inclined to give them.

On a cold spring Sunday morning in 1902, upon my return from a country trip, I was told that a man had been shot and was bleeding to death because no physician would go to see him. I asked where the phone dispatch came from and immediately called up the parties. The man said these were the facts and added some things about the physicians of this city that it is not necessary for me to give here. I told him who I was and asked if I could be of any service and he seemed glad, and urged me to come at once. I went

and found a young man of about 19 years of age lying in a pool of blood on a kitchen floor in a little, illy furnished house of the Nickle Library kind. His right arm had been shot off near the shoulder joint and a gaping wound about the size of the palm of the hand from which protruded torn flesh and the ends of the bone showed what I had to deal with. After getting assistance we took him to the hospital and dressed his wound.

Immediately I made inquiries about the people. I found the man was a carpenter, an old soldier and a paralytic. The wife and only daughter—the boy was an only son—were under the care of a physician at the time. I found the man could not or did not pay his bills. The proprietor of our local collecting agency said he was "the limit." So I sent word to the supervisor of Benton Township, one of the richest townships in the state—at once, and told him of the case and requested immediate instructions. In two weeks he came to my office and, in the presence of my office girl, authorized me to attend the case on behalf of the township.

This I did until notified by him three months later that the township would not pay the bill. I was told by some of our leading citizens in this city that the township would not pay the bill, whether authorized or not, but would not believe they could be guilty of such perfidy.

For about a year I tried to get some sort of a chance to settle the matter amicably but got nothing but discourtesy, and finally commenced suit. At the trial the supervisor denied ever having authorized the treatment, but his attorney contended that this did not matter, because the party was not a pauper and the township could not be holden. The judge charged the jury first, that if they found the supervisor authorized the attendance they were to find for me—the plaintiff—but if they, second, found that the party could have paid the bill, then or within a reasonable time thereafter—they were to find for the defense. In other words the grocer and the doctor—no matter what the emergency—must either find for himself that the supervisor does not exceed his authority in the matter or get the orders of the township board before proceeding.

The township have had a little taste of the application of this rule since this case was tried, for, whereas my case made a good recovery and the young man is able to earn a good salary now as a carpenter, a case of simple fracture has

since occurred in a township charge and the neglect to which it was subjected resulted in the loss of a leg, I am told.

I write this letter to get some ideas on the outcome of my case if possible, for I have appealed the case to the Supreme Court and the township of Benton is going to pay that bill to me or my lawyers if I can make it do so. If any one has had a like experience I would be pleased to hear from them.

FRED R. BELKNAP.

Philadelphia, Oct. 1, 1908.

Secretary, Michigan State Medical Society,
Detroit, Mich.

Dear Sir—The Board of Public Instruction in Medical Matters, which was established a year ago by the American Medical Association, will have as one of its most important duties the organization and development of a system of popular lectures on medical matters. These lectures, as stated by the Chairman of the Board, Dr. John G. Clark, in his report to the House of Delegates, are to be given under the auspices of the American Medical Association, both directly and through the state and county medical societies. It is proposed that a general plan be prepared by the Board, to which the courses in different parts of the country may conform, with such modifications as specific local conditions may render advisable. Such a plan, which will in the main follow the lines of the provisional programme for published articles contained in the chairman's report, is now in preparation.

As the plan has already been tried in some of the large cities it may be said to have passed the experimental state, and its educational value is splendidly illustrated by the effective work done in a special line by the official lecturer of the National Association, Dr. McCormack.

It is hoped that the preliminary organization can be completed during the summer, so that the actual work may be begun in the fall. The expenses, which need not be large, will be met by the individual societies. The Chairman suggests that as soon as possible, the Presidents of the State and County Societies appoint a Committee on Public Lectures, who will co-operate with the medical societies of their own state and with the National Asso-

ciation through the Board of Public Instruction, in organizing this work.

Very truly yours,

R. MAX GOEFF,

Sec'y Board of Public Instruction.

The *Detroit Free Press*, October 4, 1908, says editorially: Rudyard Kipling has been praising the doctors. In the epigrammatic fashion for which he has become famous he has told them many things about themselves that would make any one else blush. But the doctors have heard them before.

Most people will agree with his nice words. Almost all of us think highly of the doctors. We owe them our lives, some of us. Others of us owe them money, too, but the doctors do not mind that. They seem to be just as cheerful over saving the life of a debtor as they are when a cash patient recovers.

It might be pointed out, however, that Mr. Kipling has come into conflict with the authorities in one of his sayings. "There are only two classes of mankind in the world—patients and doctors," he told the graduating class of the London Medical school. The wisdom of the proverb is against his conclusion. "At forty," the proverb runs, "every man is a physician or a fool."

Apart from this unimportant bit of criticism, surely no one can find fault with the author's words of praise. The doctors do far more good to mankind than merely healing bodies. They are the saving grace of our civilization. Have we another profession or a trade that so uniformly works for others and with so little thought of self?

Living in the world and active in its affairs, they are as much set apart for its service as the monks of old. Day or night, sick or well, they are at the beck and call of the sufferer. Where other workers seek to lessen their hours of toil or to raise the rate of pay, these laborers know no time for rest and devise no corners to increase their compensation.

Perhaps the day will come when the world can do without the doctors, reaching that state of wisdom when it will not contract disease. If such a golden age ever arrives on earth, surely one of its inspiring traditions will be the lives of the physicians who did so much for humanity in these less happy times.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Influenza and Influenzal Pneumonia.—DAVIS has made a bacteriological study of these diseases as they occurred in the epidemic of 1905 and 1908 in Chicago, which has led to some interesting results. The cases of influenza corresponded clinically very closely to the type observed in the pandemic of 1889, and the general conception among physicians was that of an infection with the influenza bacillus. In all, during the two epidemics, 40 cases were studied bacteriologically. In only 7 of these were influenza bacilli found at the outset, and in these they were not numerous. Streptococci were found in every case, and usually in greater numbers than in the normal throat. Pneumococci were always present in great numbers, in most of the severe cases being found a number of times, and streptococcus mucosus in four cases.

Later in the disease and especially with the appearance of complications, the bacteriology is more complex, various organisms appearing as secondary invaders. Of these, the *streptococcus pyogenes* and *streptococcus mucosus* both seemed important in relation to complications, *streptococcus mucosus* being particularly prone to invade the eustachian tube and middle ear. Organisms of the type of *m. catarrhalis* were quite common. The influenza bacillus obviously had no great part in the causation of the primary disease or its complications in these epidemics. If one is to assume a single causative organism in every epidemic, the cause of grip is unknown. It seems more rational, however, to assume that the same clinical condition may be produced by a variety of organisms, and that the underlying factor which stimulates their development must be sought in climatic or other conditions.

Forty-two cases of the type of lobular pneumonia commonly known as "grip pneumonia," with symptoms so similar as to suggest a common cause were studied. Influenza bacilli were usually not found in the earlier stages, while

pneumococci and streptococci were common. The influenza bacillus might appear suddenly without any corresponding change in clinical condition. *M. catarrhalis* was found only occasionally and never predominating.

The author studied also the frequency of occurrence of the influenza bacillus in the sputum in other affections of the respiratory tract, such as pertussis, measles, lobar pneumonia, etc., and presents a table showing it to be very common in many of them, especially pertussis, varicella, measles, and pulmonary tuberculosis.

The author's conclusions are as follows:

1. In many epidemics of clinical influenza or grip the influenza bacillus plays little or no part as an etiologic organism.
2. The epidemics appear to be due to a variety of organisms—the *Pneumococcus*, *Streptococcus Pyogenes*, *Streptococcus Mucosus*, and *Micrococcus Catarrhalis* being most commonly found in the secretions. An organism morphologically and culturally identical with meningococcus was found in one case.
3. Complications following these cases are often serious and usually due to *Pneumococcus*, *Streptococcus Pyogenes*, and *Streptococcus Mucosus*.
4. The influenza bacillus is often found in so-called influenzal pneumonia, but not in all cases. It cannot be considered the primary cause. An abundant mixed bacterial flora is characteristic of the respiratory secretions in these cases.
5. Influenza bacilli are commonly found in a great variety of infections.
6. Experiments both on animals and human beings demonstrate that these bacilli possess pathogenic properties. They are often, or at least, sometimes, non-virulent as they occur in the secretions.
7. As secondary invaders they undoubtedly influence unfavorably other primary infections.—*Arch. Int. Med.*, Sept., 1908.

SURGERY

Conducted by

C. S. OAKMAN, M. D.

A Criticism of the Treatment of Acute Suppurative Infections by Passive Hypermia and Cupping as Advocated by Professor Bier.—

DR. L. WREDE, of Koenigsburg, contends that inflammation is not purely a weapon of defense against bacteria, but is a complex manifestation of bacterial attack and bodily reaction; that Bier's effort to increase inflammation is liable to increase the injury to tissues caused by infection. For instance, in an increasing infection the blood-stream is slowed until thrombosis results; if artificial stasis is induced in such cases, thrombosis is accelerated and made worse. He holds, with Lexer, that intensification of inflammation causes added destruction of tissue, and quotes the experiments of Frangenheim, which showed increased liquefaction after treatment by the cupping glass.

Moreover, he insists that the nature of infectious processes is such that no one can predict their course or their limitations; that in severe cases some patients will not show any power to increase the inflammation, though destruction of tissue progresses apace; that in cases of uncertain extent and severity one does not know, in using the Bier treatment, whether or not it is going to suffice; if it does not, so much more harm has already been done, whereas by the old methods one knows at once the extent and severity of the infection and is certain how to proceed. He maintains that the Bier treatment is comparable to internal medicine, in that it places the burden of cure upon the body, which must itself destroy the bacteria and their toxins; constricting bandages and suction cups are the agents to bring this about, but it is an indirect method, as compared with the old method, which instantly conducts all germs and necrotic products to the surface and leaves the body only the duties of repair. As to the favorable effects of edema, as claimed by Bier's adherents, the author contends that there are cogent arguments against its efficacy; first, because it may easily impede the capillary circulation; second, because the soluble products of inflammation are spread all over the edematous area; third, because these products, when the constricting bandage is removed, are suddenly thrown into the general circulation in a large

dose, and may give rise to systemic manifestations, not to say effects upon important viscera.

The author believes that acute inflammations are best treated by the old methods of prompt, judicious incision, and adequate drainage, because of the greater certainty and wider applicability. *Surgery, Gynecology and Obstetrics*, Sept., 1908.

Twenty-five Hundred Cases of Gas-Ether Anesthesia Without Complication.—

VAN KAAATHOVEN, of Philadelphia, reports upon the use of gas-ether sequence and recommends it for routine work. The importance of the anesthesia is not widely enough appreciated, and it is too often left to inexperienced persons, because of a contempt for its seriousness. Statistics concerning complications are difficult to weigh correctly and each series must be judged according to circumstances. Complete surgical narcosis means "that degree of sensory and motor depression required to enable the surgeon to complete his operation unhampered,* * * and not one whit more." This state will vary greatly with different individuals and the signs of it are not always easy to determine. The pupil is a good guide at times, but in over 85 per cent of cases it is unreliable. On the whole, the one best guide is the breathing; close observation of the rhythm, depth, and sound is the surest means of estimating the degree of narcosis. The author condemns the habit of watching the operation while anesthetizing; the keeping the patient at the right point necessitates undivided attention. He uses nitrous oxide as a preliminary, because of its safety, rapidity, and agreeableness to the patient; its disadvantage is that it sometimes increases mucous secretion; he recommends the preliminary injection of morphine and atropine. If mucus appears in spite of this, he cautions against over-anesthesia, and swabbing with gauze; the proper way is to raise the shoulders, turn the head on one side, and allow the secretions to drain out. He advocates the drop-gauze method of giving ether. Plethoric and alcoholic patients require especial care and skill; they sometimes require a change to chloroform. The gas-ether sequence reduces the amount of nausea, shock, and apprehension.—*Annals of Surgery*, Sept., 1908.

GYNECOLOGY AND OBSTETRICS.

Conducted by

B. R. SCHENCK, M. D.

The Time to Operate in Intra-Abdominal Hemorrhage Due to Tubal Pregnancy. At the last meeting of the American Gynecological Society, an important series of papers was read on the treatment of extra-uterine pregnancy. Manton, of Detroit, considered five conditions as follows:

1. The fulminating cases, with excessive hemorrhage from rupture of the tube or expulsion of the ovum from the ostium abdominale, with profound shock and collapse. 2. Those in which there are repeated attacks of pain, with faintness, vomiting and shock, but without excessive bleeding, as in tubal abortion. 3. Those in which rupture has occurred and a hematocele has been walled off from the general peritoneal cavity. 4. Those in which the blood has been more or less absorbed, the products of conception and exudate remaining. 5. Those in which the products of conception have escaped from the tube and continue to develop. In determining the course to be pursued when hemorrhage has occurred, rare judgment, fortified by experience, is essential. Accumulated experience demonstrates that if there is free blood in the peritoneal cavity the sooner an operation is undertaken the better the chances for rescuing the patient. The management of this condition demonstrates literally that "the man that wandereth out of the way of understanding shall remain in the congregation of the dead." Manton's paper will be found in the *American Journal of Obstetrics*, July, 1908.

Robb, of Cleveland, presented the subject in a somewhat different way. Attempts were made to cause lesions in dogs which would correspond in severity to those present in cases of ruptured ectopic pregnancies in women. Assuming that in these experiments conditions were produced similar to those occurring in ruptured ectopic pregnancies in women, the results suggested the following conclusions, as being worthy of consideration: 1. A woman suffering from a ruptured ectopic pregnancy does not die from the hemorrhage itself. Death was caused by hemorrhage and shock which might

be increased by various procedures. 2. An immediate operation might add shock to shock and so prevent recovery. 3. The hemorrhage ceases in from 15 to 20 minutes. The fact that the hemoglobin remained stationary showed that clotting had taken place. A hemorrhage that had ceased might be started up by manipulation of the tissues, and might thus be mistaken for a continuing hemorrhage. 4. The subcutaneous injection of salt improves the pulse and respiration and does not start the hemorrhage up again. 5. The use of bandages or proper weights by which the abdominal walls were approximated was likely to improve the condition of these patients.

Inequality of the Two Breasts. Variot and Lassabliere examined the breasts of 550 French women who sought employment as wet nurses in Paris. Inequality was found to be the rule (75 per cent). Generally the left breast was the larger. They milked 40 women dry, and the difference in the amounts of milk obtained from the large and from the small breasts ranged from 40 to 335 cubic centimeters. But it does not seem so easy to account for differences in the quality of the milk from the two breasts. The smaller gland, they find, yields milk richer in fat and casein, but somewhat defective in sugar. As a consequence, the baby is inclined to avoid the little breast, and that leads to a still greater reduction of its size, so that sometimes it undergoes such a degree of atrophy that the nurse is left with only one available breast. The authors state that this inequality of the breasts as regards size exists in young girls as well as in nursing women. This fact they set down as probably due to heredity, but they add that in the nurses examined by them the difference in the size of the breasts was manifestly due to the greater frequency with which, for reasons of convenience, the women gave the left breast to the child. It ought to be corrected, and the best way to secure that result is to insist on giving the infant the lesser breast.—*Semaine Medicale*, Aug. 5, 1905.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

Morbid Somnolence.—"Our present state of knowledge or lack of it, concerning morbid somnolence justifies," DR. D. ORSAY HECHT believes, his report of a case: The patient, a colored man, 48 years of age, seen first in October, 1906, whose essential complaint was his inability to keep awake. He exhibited a very moderate dyspnea, occasional fleeting pains about the heart, slight periodic headaches, large appetite, inordinate thirst, frequent micturition at night, about 4 per cent of albumin in his urine, and a slightly displaced heart. He was rather obese, having weighed for 25 years between 200 and 260 lbs. His drowsiness gave rise to the suspicion of intra-cranial luetic lesion and his history of a syphilis at 18, which had been indifferently treated and had caused an illness of a year's duration, together with two barren marriages, does not help to clear the suspicion. He, however, attributes to a severe attack of la grippe at 40, his present trouble.

Since 1895, his sleeping spells have annoyed him. He has gone to sleep when making a bed, and again when in conversation, and finally so frequent were his lapses into sleep that he was called "Sleepy Bill," and was forced to give up his regular work. He exhibited an unconquerable desire once in about 3 hours to doze, if undisturbed, for from $\frac{1}{2}$ to 1 hour. Keeping constantly on the move alone could keep him awake.

At church he falls asleep, but hears the sermon, and only knows that he has been asleep when told so. Its onset is sudden. An examination of the nervous system points to some possible organic impairment, but does not satisfactorily account for his sleep attacks. The literature of such conditions is rather meager. The essential forms are classified thus: (1) Epileptoid sleeping states; (2) Hysteroid sleeping states: (a) spontaneous "mesmeric" sleep, (b) trance and lethargic states; (3) Morbid somnolence, the expression of a distinct neurosis (narcolepsy). Two authors hazard the belief that sleep attacks constitute one of the phenomena of degeneracy, while others affirm an autotoxic pathogenesis. The sleep tendencies of exhaustion, obesity, organic cerebral disease, and diabetes and the toxemias of malarial, uremic, cholemic and syphilitic disease, are, of course, well known.

In this case the evidence of past syphilis, the presence in a mild degree of renal disease, and the element of obesity seem in combination to offer a possible explanation for the attacks, tho' it is thought that the case is best presented as one of morbid somnolence.—*Amer. Jour. Med. Sci.* for March, 1908.

A New Sign for Detection of Malingering and Functional Paresis of Lower Extremities.

—An interesting and important test is presented herewith: If a normal person be asked to lift an extended leg (while in the recumbent position) from a couch, there will be complemental oppositional pressure of the other heel, which will dig into the couch when the free act of raising the extended limb is attempted.

The same opposition is present if a genuinely paretic patient be asked to raise the paretic leg. If this patient be asked to lift the normal leg against resistance an oppositional pressure is developed in the paretic leg proportional to the voluntary power of which the patient is capable, in this paretic extremity.

In two cases of alleged paresis of one leg, when resistance was offered to raising the normal leg, great opposition was developed in the alleged paretic leg.

In two cases of malingering, on this being explained to the patient, further attempt at fraud was abandoned, crutches given up, and a normal gait resumed.—C. F. HOOVER, in *Jour. A. M. A.* for Aug. 29th, 1908.

Tabes Associated With Trophic Changes Suggesting Acromegaly.—H. B., white, a stone-cutter, of negative family history, had had syphilis 12 years before.

Six years previously had had shooting pains in legs, and numbness in both feet. He was ataxic in station, gait, and arms. Rombergism present. Pupils reacted to light.

Later, trophic changes were very marked; hands and wrists became enlarged (ulna, metacarpals, and phalanges). Chin was enlarged, nose prominent, as also zygomatic arches and occipital protuberance

The study of the case and the result of autopsy led the author to remark: "It is not improbable that the changes in the pituitary body bear some relation to the bony changes. The thought suggests itself that perhaps in cases of tabes generally, where there are marked trophic changes in the bones, there are also changes of the pituitary body, and it may be wise to examine the pituitary body, and the other ductless glands in such cases. The internal secretions are probably destined to play an increasing role not only in general pathology, but also in nervous pathology. Perhaps we have here a hint also for future study in other affections.—F. X. DERCUM, M. D., in *Jour. Nerv. and Ment. Dis.*, Aug., 1908.

OPHTHALMOLOGY.

Conducted by

W. R. PARKER, M. D.

Remarks on Iritis, with Special Reference to Gonorrhoeal Iritis.—W. M. BEAUMONT, Surgeon Bath Eye Infirmary gives an historical sketch of iritis, stating with what reluctance iritis was acknowledged as a morbid entity. Rheumatic iritis was not recognized by John Hunter (1793), and he even doubted the existence of syphilitic iritis. Specific iritis was, however, described by Schmidt in 1801, although it is not mentioned by Scarpa in 1818. Sir Ashley Cooper writes, "Inflammation of the Iris, or as it has been lately called Iritis." He had doubts whether the iritis was due to the syphilis or to the mercury, and Travers tells of a primary inflammation of the iris—"as, for example, from syphilis or mercury, is distinguished from the secondary, or that by extension from the conjunctiva, by the more sparing vascularity of the conjunctiva, etc."

Gonorrhoeal iritis was recognized by Brodie (1818). A full report of the case is given. Ashley Cooper, recognized gonorrhoeal rheumatism, and MacKenzie was acquainted with gonorrhoeal iritis. He says, "That the urethral discharge in gonorrhoea is productive, through the medium of the constitution, of synovitis and iritis has generally appeared so improbable that the fact has been very slowly admitted by medical practitioners."

The author states "that patients who have been observed to suffer from gonorrhoeal synovitis and iritis have generally been young men of scrofulous constitutions, who lived hard and were careless of exposure to cold. Each time the patient catches gonorrhoea he is liable to an attack of synovitis or iritis, or suffers first from the one and then from the other. In some cases there has been no new gonorrhoea, although a second or a third attack of inflammation has affected the joints or the eye. Over-exertion of sight has sometimes produced a new attack of severe gonorrhoeal iritis."

MacKenzie gives details of a case of gonorrhoeal iritis and arthritis with frequent attacks spreading over a period of seven years.

The interval which usually occurs between the gonorrhea and the iritis, according to the author, probably explains the fact that the former as a progenitor of the latter is frequently overlooked. As a consequence, "the iritis is fathered by chronic rheumatism or some other putative parent." Moreover, he says these secondary symptoms of gonorrhea are exceptional and therefore unexpected and overlooked. In syphilis the secondary symptoms are anticipated because they usually occur. Most modern teachers hold that gonorrhoeal iritis is rare. Fuchs says it develops in those cases in which gonorrhea has given rise to a general infection. This latter runs a course similar to that of acute articular rheumatism." The author next speaks of the rareness of the association of acute rheu-

matism and iritis, quoting Hutchinson, who says, "Iritis in conjunction with rheumatic fever of the ordinary form is almost unknown, and even in cases in which patients suffer from repeated attacks, as is sometimes seen, the eyes usually remain free. So soon, however, as changes of type occur, the disease showing a tendency to attack the smaller joints, or to affect only single joints, or to pass into the chronic form, then we get the liability on the part of the eye to suffer."

Some authors question the association of iritis with rheumatism pure and simple, or at least consider it a rare causative factor.

The author quotes from a paper written in 1900, by Mr. John Griffith, who reported a series of cases of gonorrhoeal iritis, all males, in which the iritis did not follow the gonorrhea until after the expiring of from four to fifteen years. He believed that iritis was not only liable to present itself as a complication, but also as a sequel of gonorrhea, and was doubtful about the existence of a true rheumatic iritis. The author, who has a large experience with rheumatic patients at Bath, also believes that rheumatism is rarely, if ever, a cause of iritis—many of the so-called rheumatic cases being due to gonorrhea. In twenty years he has seen 21 cases of iritis in rheumatic patients. During this period 17,197 cases were admitted for rheumatism and rheumatoid arthritis—54.75 per cent men, 45.25 women. Sixteen of the 21 cases gave a history of gonorrhea. Not one of the 5,304 cases treated for rheumatoid arthritis suffered an attack of iritis, although 3.61 per cent of 83 cases who were examined with the help of a mydriatic showed signs of old iritis. The absence of a history of syphilis is explained by the fact that very few patients go to Bath for treatment of that disease. Not one case of iritis occurred in the 2,159 cases of gout treated in this period of 20 years.

In conclusion the author says, "the list of cases shows at least the frequency of what I venture to call the syndrome—gonorrhea, arthritis, iritis, the first complicating the others, or, it may be, preceding them more or less remotely. After due allowance for the circumstance that patients suffering from other forms or iritis less often come to Bath, I think it is fair to surmise that gonorrhoeal iritis is much commoner than some authorities are inclined to allow. The connection of iritis with rheumatoid arthritis is less clear, and I leave it to others to say whether there is, in the first place, any connection whatever, and if so, in the second place, whether the iritis is the result of the rheumatoid arthritis or whether it and the arthritis are both the offspring of some common ancestor."—*British Medical Journal*, July 18, 1908.

ORTHOPEDIC SURGERY.

Conducted by

WILLIAM E. BLODGETT, M. D.

A Consideration of the Round or Stoop Shoulder Deformity.—DR. GOLDTHWAIT concludes his paper with the following remarks on treatment: The treatment of round shoulders consists of such measures as make possible the correction of the malposition, with the removal, insofar as is possible, of such elements as would tend to favor the return of the deformity.

In young children, beginning with the common well-poised infant, preventive treatment only is indicated, and this consists wholly in the proper adjustment of the clothing so that the support is put upon the base of the neck instead of upon the tip of the shoulder as is commonly done. If this rule is observed, the shoulder position of the child will not be unlike the erect shoulder of the infant, unless sickness or some other cause produces abnormal weakness of the muscles with resulting imperfect support.

With the young child with whom the shoulders have already become drooped, the readjustment of the clothing is the first requisite, so that the weight is supported in such a way that undue strain does not result. For this the underwaist, which is for the present probably the best mode of attaching the clothing, should be carefully fitted, so that instead of having the shoulder straps placed in such a way that all of the drag is received upon the tip of the shoulder, together with the forward pull of the cross-straps as the waists are commonly made, should be cut high in the neck at the back so that the drag comes on the upper part of the shoulder close to the neck and the outer part of the shoulders is entirely left free. To accomplish this the waist should open in front, and this part should be cut so as to be quite full and make no compression over the chest. The neck in front can be cut low if this is desired, and the cross-straps upon which the chief drag comes should cross over the shoulders high up near the neck and then extend down to the hip on the same side, crossing the upper thorax well to the outside so that in the pull the shoulder is forced back and the minimum amount of pressure upon the thorax is exerted. In the back the waist should be cut high in the neck and should be fitted so as to be quite flat, not loose, as the front should be. The cross-straps should pass over the shoulder from the front near the base of the

neck and then over to the other side, crossing the opposite strap like suspenders. These straps at the back join at the sides the straps after they have extended down the front, and at the point of their attachment at the side the buttons for the stocking straps and the heavier clothing should be fastened.

In the young children this adjustment of the clothing with good care and ordinary exercise is usually enough to bring about the restoration of the proper poise of both shoulders and trunk.

If the condition is more marked or has existed for so long that the posterior muscles have been weakened by the continued strain, not only should the support of the clothing be properly arranged, but a brace of some form should be used to hold the body erect and the shoulders back. Such a brace is naturally for temporary use and should be worn only until the position has been satisfactorily corrected and until the proper measures have resulted in bringing the muscles up to their proper tone. If the scapulae have not become fixed, a brace should not be required for more than three or four months, and during that time special exercises should be used in order to strengthen the muscles which are involved in holding the body erect, so that when the brace is discarded there will be no tendency to relapse.

In case braces become necessary, anything that holds the body erect and the shoulders back will be satisfactory; provided the thoracic movements are not interfered with.

In case the scapulae have become flexed, i. e., bend with marked forward concavity, so that because of this the correct position of the shoulders cannot be obtained by simple means, the treatment naturally consists in the correction of this mechanical feature.

With patients of fifteen years of age or less correction without operation is usually possible and the time required for the use of apparatus will naturally depend upon the character of the bones. If the scapulae are considerably flexed, and ossification is well advanced, removal of the upper flexed portion of the scapulae by open operation will be necessary to allow the scapulae to slip back into their normal position.—*American Journal of Orthopedic Surgery*, April, 1908.

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CYCLODIALYSIS VERSUS IRIDODIALYSIS*

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The purpose of this paper is not to bring to your attention a simplification of the long tried and highly gratifying operative means, as iridectomy and iridodialysis, for the relief of intraocular tension in the way of a newer operation, which has proven itself efficient in my own experience, as my opportunities for putting it even to an experimental test have been too limited, but rather to give you one of the earliest reports of consequence on cyclodialysis, a new operation which, as I saw it last year repeatedly performed in Fuch's clinic, appealed to me through its remarkable simplicity, and to my mind promises in the future, if adopted in properly selected cases, to give results at least equal to the older methods and, at the same time reduce the possibilities of surgical complication.

I believe it has now been long the conclusion that the pressure in the chambers of the eye is maintained at the normal through the constant physiological secretion and excretion of the fluids that flow through them, and that these fluids

have their physiological origin, like all other secretions, from the blood stream. As an anatomical origin two possible sources have been considered, namely, the two vascular membranes, the uveal tract and the retina.

The retina as a source can at once be eliminated, as clinical observations fully prove that complete obstruction of the retinal vessels by embolism causes no appreciable change in intra-ocular tension.

The uveal tract is composed of three distinct parts: The choroid, extending forward as far as the ora serrata; the ciliary body, extending from the ora serrata to the base of the iris, and the iris, ending at the pupillary margin.

The function of these several parts may to a large extent be determined by their structure and relations.

The choroid is applied by its internal layer to the external layer of the retina; its capillaries supply the pigmented epithelium and the epithelial cells stimulate the layer of the rods and cones to activity. The capillary plexus grows less from the posterior pole to the ora serrata, corresponding with the difference of sensibility in corresponding zones of the retina.

This strongly indicates that the chor-

References: Royal London Ophthalmic Report kindly given me by Mr. Treacher Collins. Erasmus Wilson Lectures by Priestly Smith. Reprint of his first report from Records of Allgemeines Krankenhaus Clinic (Vienna), by Meller.

*Read before the Michigan State Medical Society, Manistee, June 24 and 25, 1908.

oid has nothing to do with nourishing the vitreous body. And it is altogether unlikely that a membrane with such distinctly differentiated layers and a distinct and separate vascular system of its own, as the retina, should have anything to do with transmitting nourishment to the vitreous from the choroid.

The iris has a plainly defined function of regulating the amount of light entering the eye. It is possible that the posterior surface of the iris may have some secretory function and have something to do with the production of aqueous fluid, but, if so, it is very inconsequential, as we frequently find cases of aniridia, both congenital and traumatic, with no lack of aqueous fluid or change in intra-ocular tension.

The ciliary body, on the other hand, shows especial adaptation for the supply of fluid to the vitreous body, the lens, and the aqueous chamber. Where it is in conjunction with the vitreous, its secreting surface is traversed by a series of grooves and ridges, and when in relation to the aqueous it shows still greater convolution, and is particularly adapted to rapid secretion. The vitreous has its chief attachment in the region of ciliary body, is attached firmly to the ora serrata, and forward of this its limiting membrane is separated from the secreting surface of the ciliary body by only a single layer of cylindrical cells.

Pathological anatomy gives us further proof of the ready secreting function of the ciliary body. If we examine eyes which have been excised during the first stage of vitreous infiltration we find an inflammatory exudate, entering the vitreous at this portion of the uveal tract, and the region of its inflow is limited posteriorly by the ora serrata; also we find a shrinking vitreous, while separated from the retina, retains its attachment to the region of the ora. Again, while atrophy of the choroid does not necessarily affect the transparency of the

vitreous, disease in the ciliary region always tends to its destruction. Experiments upon animals have fully confirmed this inference.

Deutschmann found that removal of the ciliary processes and iris from rabbits, which he was able to effect without loss of lens or vitreous, or inflammatory destruction of the eye, was followed by total absence of aqueous secretion and by atrophy of vitreous and lens.

Schoeler and Uhthoff found that by subcutaneous injection of fluorescein there is a rapid coloration of the aqueous fluid and a more gradual coloration of the vitreous, and that the colored secretion proceeds from the ciliary body and perhaps in small degree from the posterior surface of the iris. Leplat demonstrated this by a different method. He injected potassium iodide, enucleated the eyes, froze them, cut into zones and made a quantitative test for potassium iodide of the different zones.

These and other experiments prove that the fluid which goes to nourish the vitreous body and lens and to form the aqueous, is secreted chiefly, if not wholly, by the ciliary portion of the uveal tract.

In what direction do the fluids pass on their way through the chambers, and where do they escape? There is no doubt that they pass from the posterior chamber forward through the pupil into the anterior chamber, though some have asserted that there is a current passing forward through the base of the iris, though this I think is not conclusive. Furthermore, the current through the pupil is proven by the fact that when there is complete adhesion of the pupillary margin to the lens capsule, fluid collects behind the iris, with resulting iris bombe, and other disastrous results.

That the fluids escape from the anterior chamber through the canal of Schlemm was well proven by Leber's experiments. He took the freshly excised eyes of dogs, pigs and cats and injected the anterior

chamber with diffusible colored solution, which he found passed readily into the canal of Schlemm and the veins of the iris and visibly injected the episcleral venous plexus, and the conjunctival veins and escaped through the cut ends of vessels, while colloid solutions, which do not

easily filter, was arrested and was afterward found by the microscope collected in meshes in the fibers of the ligamentum pectinatum.

Leber showed also that the cornea, so long as the posterior epithelium remains intact, is not permeated by aqueous fluid.



readily pass through membrane, caused no injection of the vessels.

He further made a beautiful crucial test by taking a mixture of carmine and Prussian blue, injecting them into the anterior chamber; the carmine, which filters readily, was found in the vessels, while the Prussian blue, which does not

Priestly Smith also made conclusive experiments proving the same thing.

There has been a question as to whether the aqueous fluid does not escape in part at the papilla. Schwalbe described certain lymph spaces within the optic sheath which he said find their exit through the lymph passages of the

skull and convey not only the lymph of the optic nerve, but that also of the retina and vitreous body.

Stillington, Leplat, Gifford and Uhthoff made extensive experiments in this line, but these mostly with the ultimate conclusion that the fluids which nourish the vitreous and lens and fill the anterior chamber are secreted chiefly by the ciliary portion of the uveal tract, and that the larger part of the secretion finds its exit through the filtration angle.

Priestly Smith, dividing glaucoma into two groups, primary and secondary, defines them simply as primary glaucoma that forms where we cannot find a previous disease as the cause, and secondary, where we *can* find a previous disease as the cause. And I would add that primary glaucoma is the condition of increased intraocular tension due to closure of the filtration angle.

Cyclodialysis is a comparatively new operation suggested by Heine, and first reported by him at Heidelberg two years ago. His method is as follows: Under cocaine anesthesia, with the eye turned slightly in and up, and held by fixation forceps, an incision is made through the conjunctiva and Tenon's capsule at right angles to the limbus, to admit of an incision through the sclera; this incision to be made parallel with the limbus and about five millimeters from the limbus and about two millimeters long. The sclerotic lamella should be cut vertically and to avoid laceration of the uveal tissues it is advisable to use the front of the edge of the knife and not the point. The penetration of the sclerotic is noted by the lessening resistance which the sclerotic fibers offer to the last remaining layer, and by the dark color of the uvea, and lastly by the fact that the least touch to the ciliary is painful, while the incision through the sclerotic is painless.

Adrenalin should be combined with the instillation of cocaine before opera-

tion. Great care should be taken to avoid the cutting of ciliary vessels, since in cases indicating this operation they are always engorged. If they are lacerated or cut they will bleed all through the operation, which will greatly interfere; also there is danger of absorption of blood through the suprachoroidal space into the anterior chamber, which would later prevent satisfactory observation of the condition of iris. The sclerotic should be kept constantly sponged with saline solution, so that the surgeon can keep a careful lookout for the dark color of the uvea.

The cut through the sclera should be long enough to admit a common iris spatula, for which two millimeters is sufficient; a much longer cut would endanger the eye with prolapse of ciliary vessels.

The second step of the operation is the insertion of the spatula between the sclerotic and ciliary body and its forward movement. It happens not infrequently that when the spatula is inserted an obstruction is felt. Almost always this is due to a few fibers of the sclerotic which are left uncut. Under no circumstances should one try to force the spatula through these, but withdrawing the spatula complete the separation of the scleral fibers. Insert the spatula through the scleral cut, then quickly turn it parallel to the inner surface of the sclerotic plane, lead it forward close to and parallel to this plane. Soon the point will appear in the angle of the interior chamber. Now comes the third part of the operation, the loosening of the ciliary body—the cyclodialysis proper.

With side movements of the spatula you now separate the ciliary body downward to the lower end of the vertical meridian, upward to the outward end of the horizontal meridian, so that you undermine a quadrant of the circle. The spatula turns round an axis vertical to its direction from the perforation point

in the sclera. The spatula should not penetrate further into the anterior chamber than just so that the point is in view. After the undermining, turn spatula to original position and withdraw slowly and carefully.

The introduction of the spatula is, in general, not difficult; the only danger is in the laceration of the ciliary body. Therefore, introduce the spatula through the scleral incision obliquely and not vertically. During the procedure of undermining the ciliary, if any resistance is felt it will be due to the following reasons:

by the spatula, particularly on its withdrawal. Here Meller recommends compression upon the eye.

A resistance will be noticed just before the entrance of spatula into the anterior chamber, due to the radiation of the ciliary fibers into the sclerotic. Slight inclination of the spatula toward the iris will remove this resistance.

A fourth cause of resistance may be from too great pressure upon the spatula, which may be suddenly forced through the fibers of the ligamentum pectinatum and between Decemet's membrane and the parenchyma of the cornea; this mis-



Fig. 4—Diagram of the Incision.

1. A few scleral fibers not cut through may cause the obstruction, but if such is the case it will be noticed before the spatula has entered the incision more than one millimetre.

2. A blood vessel leading from the ciliary body to the sclera or a ciliary nerve may be in the way.

Here Meller lays considerable stress on the necessity of keeping the wound free from blood, in order to see the dark color of the uvea, and again for the reason of the liability of insuction of blood through the suprachoroidal space made

hap will be detected by noticing a fine shining golden line rolling in itself up into the anterior chamber. This is the loosened Decemet's membrane.

It might be advisable to sharpen the end of the spatula, so that it will cut freely through the fibers of the ligamentum pectinatum, instead of tearing through them and under Decemet's membrane. When this accident happens a turbidity is noticeable on the posterior surface of the cornea, due to proliferation of endothelial cells from the trauma, which turbidity, however, clears up in a

short time, or it may be due to a slight injury of endothelial layer of the cornea less than the separation of Decemet's membrane.

A fifth reason for resistance is the peripheral radiation of the iris into posterior surface of the cornea. This Meller thinks of little importance.

At the discussion of Heine's paper at Heidelberg, Axenfeldt suggested serious trauma to the canal of Schlemm, but Fuchs suggests that no danger is to be expected from that source, as it is well protected by the sclerotic spur. However, Meller suggests that this may happen if too much pressure is made toward the inner plane of the sclerotic with destruction of the corneal radiation of the ligamentum pectinatum, as these fibers form the inner wall of the canal. This method of Heine lays the angle of the anterior chamber freely open. Figure 1 shows the angle of anterior chamber closed by the peripheral radiation of iris on the right side; the left operated side shows it free as normal. Escape of aqueous will in most cases be obviated by keeping spatula close to sclerotic. However, it is of little consequence should it escape.

After removal of spatula, the wound in conjunctiva is closed with suture, compressor bandage used, and the other eye left free. Meller has a number of times done this operation ambulatory. He avoided, as much as possible, the loss of aqueous fluid and also the use of myotics, so as to obviate any doubt as to the effect of the cyclodialysis on the intra-ocular tension.

Czermak, however, recommends eserine immediately before and after the operation, so as to keep the iris free, which would be of great value in a possible later iridectomy.

The list of forty-eight cases operated upon by Meller included a number of cases of glaucoma absolutum, also one

case of sarcoma choroidae; also a number with occlusion of pupil. A brief summary of his report is as follows:

Cases 1 to 4, acute glaucoma, only in one case the tension was increased after five days. In three he had permanent cure; of these, he had observation of two cases after seven months; in one case at end of one month.

Cases 5 to 9 were of chronic inflammatory glaucoma. Only in one case did the operation give no decrease of tension. Four cases decreased for some days; in five cases permanent—of these latter one was observed for a year, one for eight months, one for six months, and two for five months.

The next seventeen cases were glaucoma absolutum with nineteen cyclodialyses performed. In six cases no success; temporary decrease in five cases; longer lasting decrease in eight cases, but as in this series only one was observed for three months, he decides the duration of observation too short for exact conclusions.

In his estimation of the value of the operation he says it is equal in primary and secondary glaucoma, except in case of occlusion of the pupil; as the operation does not join the two chambers. He suggests its great use in cases when one wishes to be independent of the existence of an anterior chamber. He found it of great value in a case of increased tension following luxation of the lens into the corpus vitreum. Here an attempt at iridectomy will be almost surely followed by prolapse of vitreous.

In concluding his estimate of the general value of cyclodialysis, he says it cannot be compared with iridectomy, on account of its less surety of permanent reduction of tension.

The real indications for cyclodialysis are found in those cases where iridectomy is not only difficult but dangerous.

THE DISTINCTION BETWEEN HYSTERIA, NEURASTHENIA, HYPOCHONDRIA AND SIMULATION.*

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To the better informed among the physicians it may seem that a paper on this subject is superfluous, but it has been my fortune to so often meet with confusion in the minds of doctors when this question is considered, and even to have found these states confused in papers bearing on the fundamental question of their pathology, that it seems to me a further interest would be taken in the subject.

A satisfactory definition of hysteria has perhaps yet to be formulated, but the definition of Babinski that hysteria is "a condition in which all the symptoms can be created by suggestion and all the symptoms be relieved by suggestion" seems to be among the best from a scientific standpoint. It is open to the objection that in practice it is difficult to apply; that it is necessary to cure a patient in order to establish the diagnosis. But for this practical purpose we have certain signs which point undoubtedly to hysteria and its consequent curability by suggestion. These may be divided into the accidents and the stigmata, the first being those phenomena which occur transiently and the second, those more or less permanent signs which we are able to demonstrate on examination. It will be seen that an accident, such as paralysis, may become a stigma if it persists and is demonstrable as a hysterical palsy; on the other hand, stigmata occurring

transiently may be regarded as accidents. Chief among the accidents are the attacks, which when typical can hardly be mistaken. We rarely see the major attacks so ably pictured by Charcot and Giles de la Tourette, but rather abortive attacks, emotional or physical, crying or laughing, or hysterical movements or tremor with only a slight stiffening to indicate the typical arc position. The attacks of paralysis, or hemiplegia, of amblyopia, etc., while they must be regarded as among the accidents which can occur to these patients, in most cases the very nature of these paralyzes or other accidents, their onset and characteristics are proof of their hysterical nature. The stigmata are of more practical importance because of their persistence and the difficulty in simulating them. To cite a few, for example, the concentric contraction of the visual fields with the reversal of the color fields, the anesthesias of the conjunctiva or pharynx or on the whole surface which do *not* correspond to any nerve distribution or the sensory distribution of any spinal segment. The so-called hysterogenous areas, the mental characteristics, etc., are as plain and diagnostic to the trained neurologist as a heart murmur to the internist.

Now take neurasthenia, the great American disease; add irritability to asthenia and we have the definition in the name. It is the fatigue neurosis. Always the etiology is a strain, either

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mental or physical, which is more than *that* organism can bear. Man varies in respect to his ability to withstand the effects of fatiguing work, so that work which is a sufficient etiology in one man for a profound neurasthenia will not affect another beyond an ordinary tire. The difference between the simply tired man and the neurasthenic is that the tired one will recuperate with his ordinary rest. The neurasthenic cannot recoup his wasted energies without our assistance, though in his case also the chief factor in his cure will be rest. Neurasthenia is distinguished by its fatigue symptoms. The patient looks tired, feels tired mentally and physically, is easily exhausted, so tired he aches especially often in the back. So tired he can't think, will or act, the effort to do so making him more tired and increasing the symptoms. He has not sufficient energy left to fix his attention for any length of time and consequently he complains of lessened memory. With this he is irritable. His tired nervous system responds to the slightest sound or other stimuli, possibly because it disturbs the rest that the system craves. From this it follows that the reflexes will be increased. There are none of the accidents or stigmata of hysteria. Surely there is a wide distinction between neurasthenia and hysteria.

With a hypochondriac we are dealing with a person who believes he is ill when he is not. There are none of the complaints of the hysteric or neurasthenic unless indeed worrying over his supposed illness has produced a complicating neurasthenia, but on the other hand by himself, or his reading of patent medicine advertisements or family doctor books or sometimes, I regret to say, at the word of his physician, he comes to believe he has a disease of some specific sort, heart disease, gastritis. He has symptoms, or what he thinks are the symptoms of this disease or diseases, for

he does not necessarily confine his attention to one. He usually presents none of the signs of either hysteria or neurasthenia. He may or may not present some of the signs of his supposititious ailment, such as emaciation and coated tongue from a supposed gastritis. The diagnosis consists in determining the absence of disease, and the cure consists in successfully demonstrating the fact to the patient. This may be, indeed most often is, not easily done. It is a fact we will all admit that a positive demonstration of a negative, of the absence of disease, is difficult under the best of circumstances, but to demonstrate that to a patient firmly persuaded to the contrary is certainly much more difficult. Of all the diseases which we are now considering, it is the most difficult to cure.

In simulation the task of diagnosis may be difficult if the simulator is intelligent or well trained, but the theoretical distinction from hysteria, neurasthenia or hypochondria is simply that a simulator *knows* that his symptoms are unreal and put on to defraud; and he has a purpose in doing so, whether his reason be simply to gain sympathy or whether it be a more material gain. The distinctive point then of simulation is its purposive character, and, second, the consciousness of the patient of the unreality of his symptoms. This latter makes him necessarily play the part of an actor and it is easier, in my opinion, to simulate successfully a broken leg than a neurasthenia, or hysteria, or even the genuine anxiety of the hypochondriac. Of course, a Bernhardt with sufficient practice might deceive the best diagnostician, but given a sufficient length of time, simulation will certainly be detected. It is hard to play a difficult rôle constantly without a little error creeping in now and then.

I hope I have made the distinction between these four conditions clear, as that

was my sole object, and not to go into the pathology, diagnosis or treatment of any of them.

It remains to observe that these four conditions or any two or all of them may be present in the same patient at the same time. Because a patient has hysteria she or he is by no means protected against neurasthenia or hypochondria. It will give us a clearer knowledge of these two diseases than it will to call it hysteroneurasthenia, just as there is a clearer knowledge of the condition present if we say typhoid and pneumonia when he mean that these two diseases are concurrently present; typhoid pneumonia means something different, if it means anything, and I believe the term is going out of use among those who are able to diagnose pneumonia and typhoid. There are in many cases good reasons why there should be two or more of this quartet of diseases present in the same patient. An inherited tendency to a weak nervous system through alcoholism, etc., in the parents may furnish the predisposing cause for any of them; also the presence of one, far from protecting against the other, may act indirectly as a cause for the other. For instance, a neurasthenic wishes sympathy for a real ailment which he feels his physician or his family do not consider as such. He simulates, therefore, other symptoms.

He may drink some blood and then vomit it. A physician called in positively diagnoses ulcer of the stomach and may succeed in convincing the patient of that fact. He is then primarily and really a neurasthenic, but he is also a simulator, and having been convinced of an ulcer of the stomach is also a hypochondriac. There is no excuse, however, for failing to make a distinction between these conditions.

I would suggest, therefore, that in diagnosing and treating any of these conditions we should keep their distinction clearly in mind. If it is hysteria, treat it as such. If it is purely neurasthenia, treat it by rest and medicinally with a clear object in view. If it is hypochondria, demonstrate clearly to the patient the absence of his supposed disease, or if you cannot, protect your reputation by referring him to some one who can, and do not allow yourself to be deceived by the simulator. Suppose the patient has all four conditions, you should assure your patient first that you know his illness. Gain his confidence and respect by telling him which symptoms you know he is simulating for effect, show him the error of his hypochondriacal idea and base your rest treatment, your medicine and your psychotherapy on an exact knowledge of the condition present.

The best physician is the one whose reading is catholic and universal. The man or woman who merely reads medicine is narrow. The vessel of the mind is unlike any other; the more that is put in, the greater the capacity. No knowledge is entirely useless. The physician who is a good historian, who has read the best novels of his time, who enjoys a fine poem, who is pleased with the harmony and melody of sweet music, who is inspired by a noble piece of architecture, is a greater scientist because these have rounded out his character. The Bible, as literature, is a monument to genius, even eliminating from its pages everything mirac-

ulous save the fact of its creation. Who can judge of the drama more adequately than he who is the centre of great dramatic events almost daily in his professional career? But to fully appreciate these things, to add to their force as molders of character, they must be viewed from the standpoint of the man who has been refined by contact with master minds through good books. Serenity of thought and behavior comes then, and peace and tranquillity. But, it must be remembered, the best books are the surest means to attain this aim.—*Lancet-Clint*

A PRELIMINARY REPORT UPON THE USE OF THE TUBERCLE RESIDUE OF V. C. VAUGHAN IN SURGICAL TUBERCULOSIS*

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Detroit

The investigations of recent years have taught us much concerning the physiological purpose of the blood and its various constituents, and, of the latter, probably the greatest advance has been in regard to those particular cellular elements that we term white blood corpuscles. Fortunate it is for the general economy that we have, together with the oxygen-bearing red blood corpuscles in the circulating stream, these other cellular elements whose main role appears to be the removal of foreign and waste material, together with the protection of the body against pathogenic bacteria, so many of which are capable of doing harm to the tissue cells.

Some observers (notably Wright) have stated that the ability of the leucocytes to ingest bacteria is dependent upon the presence in the serum of certain substances termed opsonins. However, with our present knowledge we must assume that the leucocyte plays the most important part, and it is necessary that such cells float free in the circulatory system, where they can be carried to any portion of the anatomy that may require their aid.

It is only reasonable to suppose that a white blood cell, just as any other tissue cell, requires oxygen, in order that it may perform its function, and that when deprived of this element these cells die as well as any other tissue cells. However, we know that such cells have the power of wandering to some distance

from the blood channel proper, and just when the death of a leucocyte occurs it would be difficult to state, although when they have collected in sufficient numbers to form what is termed "pus," the probability is that their function for good has ended, and that these cells themselves are a menace to health, because of the poisonous proteids liberated in their own decomposition.

If this hypothesis is correct, it stands to reason that any form of bacterial vaccine, or leucocytic sensitizer, as some term such substances, is of value only before the actual formation of pus, or in the tissue surrounding a pus cavity to which the blood supply is still intact. The leucocytes in the pus cavity are themselves inactive, and in such cases we should not expect any satisfactory result from any other method than incision and drainage. However, an extension of the disease process into surrounding tissues may be stopped, or much lessened by the aid of specific "leucocytic sensitizers." We have no right to expect a "cold abscess" to disappear under the administration of a tubercle vaccine of any sort, but we do expect that such a substance used along with evacuation of the dead white corpuscles will result in the majority of cases in a cure. Many physicians have decried and underrated the use of a bacterial vaccine, because it has failed to cause the disappearance of an abscess, but from every conceivable hypothesis as to the action of these substances, such a result should not be looked for.

The man who expects bacterial pro-

*Read at the forty-third meeting of the Michigan State Medical Society, in Manistee, June 24 and 25, 1908.

ducts to accomplish a cure in all cases will have many disappointments, and must learn from experience that only selected cases will be benefited, or more correctly, that a vaccine will not accomplish everything, but must be used as an adjunct to other forms of treatment, and in the case of tuberculosis of glands, bones, joints, etc., always in combination with surgical measures. The dead tissue must be removed and the treatment then is to prevent a further extension of the infection. We have no right to expect dead tissue to be brought back to life by any means whatsoever; but we can and do expect that tissue which still has blood supply, can return to normal function when the disease process has been terminated, and such results are more speedily brought about with the aid of injections of bacterial products.

In our work with tubercle residue, we have kept this point in view, and our results, we think, will speak for themselves.

Briefly, the preparation of the non-toxic residue of the tubercle bacillus is as follows: A large amount of the germ substance is washed with water, dilute salt solution, alcohol and lastly ether. This process removes salts, fats, wax, several proteid bodies and traces of carbohydrates, thus leaving the cell as free from impurities due to the presence of culture media as it is possible to obtain. The cell substance is next heated in a flask with a reflux condenser, with from 15 to 25 times its weight of a 2% solution of sodium hydroxid in absolute alcohol, and by this means it is split into a toxic and a non-toxic group. The toxic portion is soluble in the alcohol; the non-toxic is insoluble and it is with this portion we have to deal.

For a full report as to the nature of these split products, and their immunizing effect, reference should be made to "The Shattuck Lecture," of 1906, delivered by

V. C. Vaughan. In this lecture he deals principally with the colon bacillus, but the same general rules apply to the germ of tuberculosis as well. Suffice it to say, that no true immunity is obtained from the "crude soluble toxin," but rather a slight tolerance to the poison; while true immunity is obtained from the use of the non-toxic residue, which lasts over a variable time, the length of which may be governed by repeated injections. For this reason it is advisable to give small injections which can be repeated as necessary, so that no untoward effects may be observed, a portion of the subject that will be discussed at a later time.

For the sake of brevity in reporting the following cases, we will leave out all portions of histories, except those upon which a diagnosis of tuberculosis was made. The cases are arranged in relation to the site of the disease, and here I wish to thank Dr. Ballin for the privilege of using the residue upon his cases and reporting the same, and Dr. V. C. Vaughan for the residue used, as well as his cases.

Division A.—Tuberculous Peritonitis.

Case 1.—Miss E., aged 18, single. (Patient of Dr. V. C. Vaughan.) There was no family history of tuberculosis. In January, 1907, the patient first noticed that her abdomen was becoming large. This progressed rapidly until March of the same year, when Dr. Brainard, of Alma, Mich., operated. The abdomen soon re-filled and in May Dr. Lynds, of Ann Arbor, again performed celiotomy. Both operations consisted in simply the removal of ascitic fluid. After the second operation the abdominal wound failed to heal, but filled with a mass of tubercular nodules. The patient became greatly emaciated, being reduced to 87 pounds. On July 1st, an injection of 1 C. C. of a 1% solution of tubercle residue was given. This was repeated once a week until the 14th of August. During this time the tubercular granulations disappeared. The wound healed with the exception of a minute point which continued to discharge an occasional drop of pus, until January, 1908, when

a small piece of glass was removed from this point. This was followed by prompt closure, since which time the patient has appeared perfectly well. She now weighs 110 pounds. As a precautionary matter an occasional injection has been given during the last three or four months.

Case 2.—Mr. E. A., aged 27, married. (Patient of Dr. Ballin's.) The patient had had a suspicious lung lesion, as reported two years before by Dr. Flintermann. When first seen, a walled-off collection of fluid below the transverse colon could be easily mapped out. The abdomen was greatly distended, and the prostate gland enlarged to four or five times its normal size. The patient had evening temperature and night sweats. On March 30th, 1908, the abdomen was opened. The peritoneum was greatly thickened and the large intestine from the cecum to rectum, together with the bladder and prostate, consisted of a hard, thickened mass of friable tissue. About two quarts of fluid were allowed to run out, and the abdomen closed with rubber drainage. The drainage was removed at the end of ten days, and the wound promptly closed except for a tubercular nodule in the scar. The abdomen quickly refilled. This patient was given six injections of the residue in 1 c. c. doses at intervals of from 5 to 10 days. The prostate gland became much smaller, the refilled abdomen diminished in circumference by one and one-half inches and the tubercular growth in the scar disappeared. However, the patient became greatly emaciated, and on May 20th died, apparently from edema of the lungs. No post-mortem was obtained.

Case 3.—Miss T. O., aged 10. (Patient of Dr. Ballin's.) This patient's father died of tuberculosis. On April 20th, 1908, Dr. Ballin was first called to see the case, a diagnosis of intussusception having been given. At operation, upon the same day, this was found to have reduced itself, but the appendix was diseased and removed. This proved to be tuberculous. A good recovery was made except that the abdominal wound refused to heal. One injection of $\frac{3}{4}$ c. c. of 1% solution of tubercle residue was given, which was followed by healing of the wound. At present the patient seems to be in perfect health.

Division B—Tuberculous Kidney.

Case 4.—Mr. B. B., aged 22, single. (Patient

of Dr. Ballin's.) No tuberculosis in family. The patient wet the bed up to the age of 12 years. In the spring of 1906 he noticed a slight swelling of the left testicle. For the past 4 months the patient has noticed a burning sensation when passing urine, and this function must be performed two or three times an hour, and five to twelve times during the night. He has suffered from hemorrhage from the urethra four different times, and states that on one occasion, about one and one-half pints of clear blood was passed. He has lost about 12 pounds, and has pain and tenderness over the left kidney. The right testicle has a cherry-sized tumor in the tail of the epididymis.

The patient has never suffered from colic or passed gravel. The bladder examination showed it to contain about 2 oz. of urine, and this was pale,—sp. gr. 1020, contained albumen, pus cells, degenerated red blood cells, an occasional kidney epithelial cell and tubercle bacilli.

Six injections of tubercle residue have been given at intervals of from ten to fourteen days.—from Feb. 10th, 1908, to May 10th, 1908. The patient has gained in weight and the frequent desire to pass water has disappeared. There have been no more hemorrhages from the urethra, although urine examination shows the presence of blood cells and pus at times, but in much smaller quantity.

Case 5.—Mrs. L., married. (Patient of V. C. Vaughan's.) The important points in this history are frequent micturition since a child, hematuria, pain and tenderness over the right kidney. The patient has slight afternoon temperature, and also a suspicious area in the right lung. Hemoglobin was 60%. On Jan. 25th, 1908, she was sent to me for a cystoscopic examination. The bladder wall was normal in appearance, but a few very minute blood clots were noticed floating in the urine. Catheterized urine from the right kidney showed a few ureteral epithelial cells and also a few blood cells. No tubercle bacilli could be found. However, upon the clinical symptoms and findings given, a diagnosis of tuberculous kidney was made, and the result of the specific treatment tends to show that it was correct. The patient received an injection once a week, from Jan. 18th to May 2nd. She has gained a few pounds in weight, the frequent micturition has stopped, and the tenderness of the kidney disappeared. There has been no blood in the urine since the middle of March.

Case 6.—Miss T. L., age 19. (Case of Dr. Ballin's.) Several relatives have died from tuberculosis. For the past year this patient has suffered from burning and pain on urinating. She must pass water three to four times during the night, and several times during the day. Cystoscopic examination showed clear urine from the left kidney, and pus from the right. Examination of this for tubercle bacilli was positive. The patient was operated upon Jan. 21st, 1908, and right nephrectomy done. The ureter was left in situ. She has received four or five injections of residue since the operation and the bladder symptoms have almost ceased. However, she still complains of soreness in the right side at times, which is probably due to the blocking and filling of the remaining ureter, with relief when it discharges its contents. She has gained much in weight, and is still receiving injections.

Division C—Psoas Abscess.

Case 7.—Mr. R. (Patient of Dr. Ballin's) This patient was operated upon Dec. 22d, 1907, a diagnosis of psoas abscess having been made. The pus was evacuated and the cavity packed with iodoform gauze. This was removed six days after, and one injection of tubercle residue was given. The wound closed promptly and the patient has been apparently well since.

Division D—Glands of Neck.

Case 8.—Miss E. M., age 21. (Patient of Dr. Ballin's.) Grandfather died of tuberculosis. The patient had noticed the enlarged cervical glands upon the left side for one and a half years. For the past six weeks she has received X-Ray treatment. On Feb. 7th, 1907, six large cheesy glands were removed with difficulty, because of the dense fibrous adhesions present. The wound was closed except for a small strip of iodoform drainage. Double tonsillectomy was done. The wound healed nicely except for a small fistula which discharged an occasional drop of pus, and one enlarged gland appeared in April. At this time injections were commenced. The patient received five at intervals of from 10 to 14 days. After the second, the fistula closed, and after the fourth the gland could not be felt. She has gained about 10 pounds.

Case 9.—Mr. N. (Case of Dr. Ballin's.) This patient was operated upon March 23rd, 1908.

The glands and fascia were removed from the left side of the neck. One week later he was given an injection of 1 c. c. of the residue. He has remained perfectly well to date.

Case 10.—Mr. C., age 27, married. (Case of Dr. Ballin's.) Father died from tuberculosis. The patient was operated upon May 12th, 1908. He had noticed enlargement of the left infraclavicular glands for six weeks. The dissection consisted in the removal of several caseated glands, and a strip of iodoform gauze drainage was used. One injection of residue was given on May 16th. The wound closed promptly and the patient is well to date.

Case 11.—Miss B. (Case of Dr. Ballin's.) The patient complained of the rapid enlargement of lymphatics of the right side of the neck and axilla. On May 22d, 1907, four large adherent caseated glands were removed from above the clavicle and also an adherent mass of broken down glands from the axilla. Two weeks later a small gland was noticed below the clavicle. The patient received three injections of the residue, which were followed by the disappearance of the large gland, and gain in weight.

Case 12.—Mr. H. G., age 17, single. (Case of Dr. Ballin's.) Cousin had been operated upon for tubercular glands of the neck. The patient had been operated upon for glands of the left side 2 years previous. These had reappeared six months later. On March 14th, 1907, the glands along the sterno-cleido mastoid were removed. On May 28th, it was found necessary to remove those along the sterno-hyoid muscle. The patient was then given injections of the residue with the result of prompt closure and cessation of the infective process.

Division E—Tuberculosis of Joints and Extremities.

Case 13.—Mrs. C. C., age 25. (Case of Dr. Ballin's.) This case was one of tuberculous necrosis of the head of the left tibia. She had been operated upon about 8 months previously, and a discharging sinus was present. Operation was performed on May 13th, 1907. The incision was carried from the sinus up along the outer side of the patella, the lower portion of which was removed because of necrosis. Many little pus pockets were opened around the synovial membrane, which was thickened and tubercular.

The joint was opened and found to contain pus. Iodoform gauze packing was used, and after treatment consisted of Bier's hyperaemia, splinting, and 8 injections of the residue. The wound closed and has remained so. There is neither swelling nor tenderness present and the patient has good use of the limb, which also possesses slight motion.

Case 14.—Mrs. M. N., age 23. (Patient of Dr. Ballin's). Two years ago, after a miscarriage, the patient complained of pain and swelling in the right elbow joint. Later this ruptured and a discharging fistula over the right radial condyle is present. Ankylosis is present, the elbow joint forming an obtuse angle. No motion except slight pronation. On March 14th, 1908, the elbow joint was opened and curretted. The wound was packed with iodoform gauze, and the arm splinted. She has received injections at intervals of from 10 to 14 days since. The pain has ceased and the swelling has much diminished. A slight fistula is still present but appears to be closing rapidly, and there seems to be a slight increase in motion.

Case 15.—Miss H. D., age 10. (Case of Dr. Ballin's). For two years this child had complained of pain in the right hip and knee, of such severity that she could not bear weight upon the limb. At the time of the examination the child had a temperature of 100. The right leg was flexed on the thigh and rotated slightly outward. The limb was one and one-half inches shorter than the left. A diagnosis of adductor abscess was made, and the same was opened and drained. This operation was performed on December 17, 1907, after which the limb was encased in plaster. On January 15, 1908, it was found that the abscess had reformed. This was punctured and a considerable quantity of sero-purulent fluid evacuated. Two injections of residue were then given, since which time the leg has, apparently caused no trouble.

Case 16.—Mr. Mc. (Referred to me by V. C. Vaughan, Jr.). This case was sent to me because of an ulcerating tumor on the sole of the right foot below the second toe. He had a suspicious lesion of the lung, but frequent sputum examinations failed to show the presence of tubercle bacilli. The mass on the foot was extremely tender, and there was an ulcerating surface about the size of a Canadian five-cent piece, which was surrounded by a hard indur-

ated border. The patient had been receiving iodide for several days. On January 24, 1908, the tumor was excised and the wound sutured. The iodide was increased and the wound appeared to heal. Sections of the tumor showed a chronic inflammatory process with giant cells present. On March 18 the patient returned with a recurrence of the local foot lesion. The ulcerated surface was about the size of a lima bean, and surrounded by a widely infiltrated area. It was my opinion, as well as that of several other physicians who saw the case, that the toe would have to be amputated; however, I decided to try the residue, especially as I was anxious to ascertain if it would have any purely local effect. The soft ulcerated portion was curretted away, and a small piece of gauze which had been saturated with a one per cent solution of the residue was packed into the wound. Sections of the curretted showed giant cells as formerly. The day following this application the wound was somewhat reddened and more tender, but upon the second day the tenderness had disappeared in greater part, and the ulcerated surface was clean and presented healthy granulations. Applications were continued in this way at intervals of from four to ten days throughout April, with the result that the ulcer would heal and the infiltration was somewhat lessened. However, the surface would heal over, only to break out again in a few days, showing that the portion reached by the application improved, but the more deeply involved tissue was not affected. On May 7, $\frac{1}{2}$ c. c. of the residue was injected deep into the ulcer and also 1c. c. into the right side of the chest. The improvement after this was marked. The infiltration disappeared and the ulcer healed over, so that by the 11th, when a second injection was given, only a small pin-head area remained. This quickly disappeared and was followed by the formation of a scar, which is in every respect healthy. The patient has gained in weight, and the lung condition is much improved.

A resumé of the foregoing cases will show that undoubtedly the residue has a curative value. In just what manner this substance acts it is impossible to state at present, but it is supposed to form an enzyme in the circulating fluid, which reacts chemically with certain chemical groups in the tubercle cell,

thus splitting up and destroying the cell. In connection with this theory those changes which affect the leucocytes are of special interest. At present this portion of the work is not sufficiently advanced to warrant a report. However, we can definitely state that there is no preceptible change in the total number of these cells per c.c. There is produced a marked change in the differential count—the polymorphonuclear cells being increased 15-20% within 48 hours.

Case 16 lends weight to this theory, since it appears that the residue had to be taken up by the circulating stream before any marked results could be obtained. Cases 9 and 10 were given injections in advance of the appearance of any recurrence, and hence are of rather negative value, especially since the gland-bearing fascia was included in the dissection of the gland. But their prompt healing and the subsidence of slight local wound reaction after the injection lead us to think that it possessed some therapeutic value.

•Mich. State Journal, Feb., '08.

It will be noted that in some cases we have used Bier's hyperemia, together with incision, drainage and injection of the residue. We believe that we have scientific reasons for favoring all three of these procedures at one and the same time.

A few months ago in an article on "Felons,"* I made mention of the fact that a leucocytosis was produced below a Bier's constriction after 4 to 6 hours. This is an actual increase in the number of leucocytes, and does not affect the differential count. So by using hyperemia in conjunction with residue injection we bring an increased number of the specially sensitized leucocytes to that portion that is affected by the disease. The incision having been made to remove necrosed tissue, the combination of hyperemia and residue injection should and does hasten the cure, besides making it unnecessary to perform such radical and sometimes deforming operations as tuberculous disease has frequently required.

The venereal diseases are few in number but their complications are numerous owing in great part to the negligence of patients, on the one hand, and to inadequate treatment, on the other.

The prevalence of gonorrhea seems to have existed from the remotest antiquity. Descriptions are to be found in the oldest documents extant and it seems to have preserved its characteristics down the ages.

To insure better results in the treatment of patients adopt the plan of encouraging them and of taking an interest in their condition.

Never state that any disease is incurable. If you cannot cure it some one else may do so. See the one who knows more than you do. This often effects a cure.

Every man has a prostate and seminal vesicles, but they are not necessarily diseased. A very carefully conducted diagnosis is necessary to establish the diseased condition of the one or the other and the examination should be expert and capable.

A very good point to learn lies in the proper diagnosis of a dermatitis from an eczema. Their causes as well as treatment differ very widely.

SOME RECENT PROGRESS IN MEDICINE AND SURGERY.*

H. E. RANDALL.Lapeer.

Last year before this society I took up Bier's treatment, opsonic therapy, some studies in tropical diseases, and Metchnikoff's studies on the prophylaxis and cure of syphilis, and Crile's study of the blood pressure and shock.

A review of the past year's work in medicine shows progress in several lines; to my mind the greatest progress has been made in the treatment of general peritonitis. Formerly the death rate was about 90 per cent, but with the Fowler-Murphy treatment, the results are so remarkable as to be unbelievable. Max Ballin, of Detroit, recently published a report of twenty-five cases with one death, treated by this method. Dr. J. B. Murphy's assistant told me they had had fifty-one cases with only two deaths, and that not due to peritonitis. A general peritonitis means a case in which the pus is free in the abdominal cavity, and there are no adhesions—no walling off—of the infectious material. Murphy says he would not like to see the cases after three or four days, but if seen within forty-eight hours he operates, closing the perforation, whether of the stomach or intestines, or doing what other work may be necessary. He does a short operation, and if he fails in ten minutes to find the opening, he puts in drainage. The after-treatment is known as the Fowler-Murphy treatment. The Fowler position is a half sitting position. At the Mercy Hospital the beds are so made that this position can be easily had. These are the essentials, to keep the infectious material as low in the pel-

vis as possible, and to relieve tension, which means that there will be less absorption.

The Murphy part of the treatment is enteroclysis. A pint and a half of normal saline solution by the drop method is introduced into the rectum every hour. Sixty drops a minute is over seven ounces an hour. This is continued until the patient is better. A fountain syringe is placed from six inches to three feet above the level of the rectum, and it is found that the rectum will absorb an enormous amount of solution, which dilutes the poison and helps the patient to get well. The nozzle, after being placed in the rectum, is not removed, and the syringe is refilled as necessary.

Thyroid, Parathyroid, and Thymus.

In the development of the child there are four branchial (not bronchial) clefts, analogous to the gills of fish, with four intervening bars called branchial arches. When these fail to coalesce in fetal life we have congenital cysts, called branchial cysts or fistulae. These may or may not open directly into the pharynx from the outside skin. The thyroid gland first develops as a vesicle at the dorsum of the tongue. The thyroid sinks from the foramen cecum to its position later in life, sometimes as low as the top of the sternum, leaving a duct, the thyroglossal or thyrolingual duct, which becomes obliterated. If this duct fails to close properly it leaves a fistula. This occurs in the median line. When misplaced thyroid tissue remains at any place on its journey downward, we

*Read before the Lapeer County Medical Society, July 8, 1908.

have an accessory or aberrant thyroid. These bodies may be found above or below the hyoid bone, and within, anterior to, or behind the larynx or trachea. The parathyroids develop from the dorsal side of the third and fourth branchial pouches, along with the thymus, which develops from the third and fourth and partly from the second branchial clefts. Before Billroth and Kocher commenced operating for goiter, there were few operations on the thyroid glands. Weiss in 1880 recognized first the occurrence of tetany after the removal of the thyroid gland. In 1883 Kocher called attention to the disease due to the removal of the thyroid gland, myxedema. In consequence, it became a surgical rule never to remove all of the thyroid—some of it must be left. Up to 1891 it was unexplainable why the removal of the thyroid gland meant death to cats and dogs, and carnivora in general, while rabbits would live. In that year Gley called attention to the fact that in the rabbit there were two bodies entirely separated from the thyroid gland and found that if these were removed with the thyroid gland, the same effect was produced as in dogs, viz: tetany and death. Ten years before this, in 1880, Sandstroem had recognized the glands as parathyroid glands, had described their anatomy and position, that there were four of them, and also described accurately their histology, but little notice was paid to it. In 1896 Vasale and Genrali showed that tetany was due to the removal of the parathyroid gland. In 1903 it was accepted that removal of the parathyroid alone caused tetany, while removal of the thyroid alone caused operative myxedema. There may be less than four parathyroids, and there may be more. Their exact relation to the thyroid gland is of the utmost importance in operating for the removal of the thyroid gland. In tetany due to the removal of the parathyroid, there

are spasms, pain and disturbances of sensation, and the signs of Chvostek, Trousseau and Erb. Trousseau's phenomenon is a tetanic spasm in a limb as the result of compression of its main vessels and nerve trunks. Chvostek's sign is a twitching brought out by gently stroking over the area of distribution of the fifth nerve. Erb's sign is due to electric hyperexcitability of the motor nerves, present in these cases, especially of the ulnar nerve. If you have read Meltzer's address on ideas and ideals, you will see still further studies on this subject. McCallum, of Baltimore, found that the tetany in dogs due to the removal of the parathyroid could be prevented for 24 hours by using intravenous injections of a calcium salt. Injections of potassium salts increase the tetany. The calcium salts acted as an inhibiting agent.

The thymus gland increases in size from birth until the second or third year, at which time it extends from the thyroid gland almost to the pericardium. The thymus gland is a bilateral body enclosing the trachea. Close to the capsule of the thymus runs the phrenic nerve, and adjacent are the left vagus and recurrent laryngeal. The gland covers from above downward the innominate artery and left innominate vein and pushes between the innominate artery and the right common carotid, and on the left side the common carotid lying on the trachea. Rehr cites twenty-eight autopsies in which pressure marks were found on the trachea and five operations of removal which gave relief. It is not always the size, but the shape of the thymus that causes trouble.

The chief symptom is a form of dyspnea which comes on suddenly, with entirely free intervals. These cases are hard to explain. The position of the head thrown back, which would cause more pressure, has been described by reporters of thymus death. These cases

are probably due to changes in the circulation causing an increase in the size of the gland. In cases of thymus disease, with each inspiration there is a sinking of the lower part of the neck. This, with dulness over upper mediastinum, with inspiratory stridor and eventually cyanosis, makes the clinical picture. The attacks resemble spasmodic croup. There have been reported lately several sudden deaths due to thymus disease. The pathology and physiology of the thymus are obscure, and only a beginning has been made as to its mechanical workings. Koenig reports a case of partial removal of the thymus which was followed by a severe rhachitis. For treatment an incision is made, the capsule of the thymus is recognized and seized with forceps and drawn upwards, the capsule is divided and part of the gland removed. It is not practical nor possible to remove the whole gland. Part of the gland is enucleated, the capsule is sewed outside, and drainage used.

We know that two alterations take place in the function of the thyroid gland. One is hyper-thyroidization, or over-production of thyroid secretion, and the second is hypo-thyroidization, or diminution of thyroid secretion. We know that the removal of the thyroid gland by operation causes operative myxedema which can be cured, but the treatment must be continued by giving thyroid extract the rest of the patient's life. Loss of thyroid function interferes with growth and development, causes myxedema or swelling of the skin and subcutaneous tissues, depression of the circulation, a slow pulse with low tension, hemorrhages, especially of pregnancy, and symptoms of the nervous system, such as lassitude, apathy, mental dulness, etc.

Exophthalmic goiter, Basedow's or Graves' disease, is due to an over-activity of the thyroid gland. It is a condition of hyperthyroidization; a better

name is thyrotoxicosis. The symptoms are enlarged thyroid glands, rapid pulse of high tension, a fall of pressure being an unfavorable sign. The eyes protrude or are prominent. With this are Graefe's sign, lagging of the lids when looking downward, or Kocher's sign when looking upward. The eyes are staring. With these symptoms are perspiration, attacks of indigestion, watery stools, weakness, and fatigue. The menstrual flow diminishes or ceases. There are tremors of hands, feet, tongue, and eyelids. Operation is indicated in all cases that do not present degeneration of heart muscle, or low blood-pressure. As statistics have been variously given, I will quote Kocher's and Mayo's statistics. Kocher had 200 cases with a mortality of 4.5 per cent and 85 per cent of recoveries. Mayo's 200 cases had a mortality of 5 per cent, 70 per cent cured and 20 per cent improved. In a medical way only Beebe's and Rogers' treatment with a cytotoxic serum has given good results, but an objection to its use is its severe reaction. We have used P. D. & Co. thyroidectin in several cases and have had some satisfactory results. We had one case die while under this treatment. I do not think that all operators can get the same result that Kocher has, because he is the world's greatest expert in this line of work, but it shows what can be done.

Dr. Geo. W. Crile has recently made some valuable suggestions as to the method of operating on these cases. He found that in dogs affected with Graves' disease any excitement such as fear or anger would cause symptoms of severe hyperthyroidization. This led him to the following procedure for several days preceding the operation: He had his assistant put an ether mask over the patient, allowing him to inhale volatile oils, and when he found that the patient was in proper condition, but without the patient knowing it, he was carefully put

under anesthesia. The night before the patient would be given something to quiet him and an hour before operation he was given a hypodermic of morphine.

Accessory thyroids or aberrant goiters are very rare, but the diagnostic point is a nodular tumor in the median line of the neck.

Beck's treatment of fistulous tracts and tuberculous abscesses was accidentally discovered while preparing fistulous tracts for X-ray pictures. It was found that fistulae injected with the following formulae would often heal. Two formulae are used, and the method is applicable to all fistulae and abscesses of tubercular origin, except intra-cranial sinuses or biliary fistulae. The first formula is for early treatment:

℞ Bismuth subnit.30 grams
Vaseline60 grams
Mix while boiling.

The second formula is for late treatment:

℞ Bismuth subnit.30 grams
White wax 5 grams

Soft paraffin 5 grams
Vaseline60 grams
Mix while boiling.

To use the paste, melt on a water-bath until liquid. This is drawn into a syringe and by watching carefully the temperature, it is forced into the fistula.

Since typhoid fever, as soon as it produces constitutional symptoms, has bacilli circulating in the blood, Peabody has lately brought out the following method, by which he was able to diagnose typhoid fever before he could get a Widal reaction. A very early diagnosis can thus be made. A test tube containing 5 c.c. of fresh sterilized ox-gall is mixed with from one to two c.c. of blood taken from patient's ear. This tube containing bile and blood is then put into an incubator for 15 hours. At this time organisms may be found, but if not, several loopsful are transferred to a tube of coagulated blood serum, which in from 3 to 5 hours in the incubator will show the presence of motile bacilli. This would seem to be a contradiction to the old teaching that bile is antiseptic.

Advice to Students.

DR. GEORGE DOCK, who is now Professor of the Theory and Practice of Medicine and of Clinical Medicine, the Medical Department of Tulane, delivered his initial lecture on October 5 at Tulane. Among other things he said: "In the treatment of patients the student should always remember to be as humane as possible and to treat those brought under their observation as they would treat their own brothers or fathers. This manner should be carried out even as to the language to be used in the hospital in the presence of the afflicted. Not to refer to them as interesting cases, but rather to speak of an interesting case as an important case, or in some such term as would not give the patient the idea that he was only a subject for experiment. I warn you to avoid slang in referring to cases. It is important to understand these details, as hospital work is becoming more and more important every day. It used to be thought that the helpless sick had no rights at all in connection with medical practice, but this is not so now.

"The sick man does not object to being investigated. He appreciates everything that is being done and where many people are working together toward the same end the sick man has a better chance to recover. Where the bright and energetic undergraduates are assisting the physicians, where many people are interested in the same thing, and where the results are known, it is easier to check up the work of others. Sick people get along better in hospitals where student classes exist than in institutions where the undergraduates are not allowed to attend the patients at all.

"Much knowledge can be gained by reading and a familiarity with the various medical journals. Those students who are acquainted with any foreign tongue, or any of the dead languages should continue to study them, as it would be of great assistance in acquiring a universal medical knowledge. Physical culture is also to be commended."—*Lancet-Clinic*.

CASE REPORTS. 1.. PUERPERAL SEPTICEMIA. 2. SEPTIC GALL BLADDER. 3, 4, 5. ECTOPIC GESTATION. 6.. SYPHILIS*

FRANK B. TIBBALS, M. D.,

Detroit

The report of well-studied cases, presenting a clinical picture not infrequently met, is often of value since all of our medical knowledge is based on deductions from the observation and experience of many men—hence the reports of rare or unusual cases not well described in the text-books, may add to our clinical knowledge, and perhaps aid us in the recognition of diseases presenting abnormal or masked symptoms. I have selected six cases of not uncommon conditions, each presenting some feature of interest somewhat out of the ordinary.

Case 1. Puerperal Septicemia.

Mrs. D. was seen August 6th, 1906, with Dr. J. H. Sanderson, who had delivered her ten days before. Evidence of infection began twenty-four hours after labor, with chill and abnormal lochia. Her physician had curetted and frequently irrigated the uterus without any improvement in the general condition—the pulse running to 140 and the temperature as high as 105° F., with tympanites and frequent vomiting. Bimanual examination disclosed a large, boggy, but freely movable uterus, with no evidence of infection outside the uterus itself. A consultant who had seen her earlier on the same day pronounced the case hopeless, and was promptly discharged. I gave a guarded prognosis, advised rectal irrigation and feeding, the continuance of antiseptic intra-uterine irrigation and the liberal use of antistreptococcic serum. Forty c.c. were given that evening; the patient had a normal temperature the following morning, and with

one slight setback made a rapid, ideal convalescence. In the seemingly moribund condition of the patient no cultures were taken to determine the infecting micro-organisms, but the prompt effect from antistreptococcic serum is notable in view of the conflicting evidence as to its value in puerperal infections.

Case 2. Septic Gall Bladder.

I saw Mrs. R., of Romulus, with her physician, Dr. F. D. Whitacre, shortly after noon on April 11th, 1906. Six weeks before she had miscarried without any septic symptoms, rapidly recovering her usual robust health. At noon on April 9th was taken suddenly ill with pain in the right shoulder and chest, and vomiting, which continued until the evening of the 10th inst., when her temperature was 100° F., rising to 100.5° the following morning, to 101½° at 1 p. m., when I saw her, and to 102½° with pulse of 124 at 3 p. m. Physical examination was negative except for a distinctly felt sensitive lump in the right upper quadrant of the abdomen with surrounding tympanitic area. Absolutely no history of previous abdominal pain, or symptoms referable to the stomach, gall bladder or appendix, could be elicited. The marked rise in temperature and pulse enabled me to secure consent for immediate operation. An incision over the lump disclosed a much distended gall-bladder, which was drawn into the wound, sutured to the peritoneum, incised, and emptied of its contents, consisting of bile, pus, and about 50 gall stones of various sizes. The wound was closed with rubber drain in the gall-bladder, and the recovery was uninterrupted, except by a mild pneumonia of the lower right lung. We are prone to think that gall-stones manifest their presence by causing indigestion, colic and jaundice, yet gall-stones are frequently present for years, as doubtless in this case, producing no symptoms until the gall-bladder itself becomes inflamed or infected.

*Read at the forty-third meeting of the Michigan State Medical Society, in Manistee, June 24 and 25, 1908.

Cases 3, 4, 5. Ectopic Gestation.

Mrs. R., of Detroit, aged 36, was seen at her home on the morning of May 8th, 1906, her husband having first called at my office and given me the following positive diagnostic history. She has one child aged ten, with no subsequent pregnancies. Her last period was February 25th, and early in April she visited a physician to learn if she was pregnant, who after examination told her the menopause had begun. Shortly after she was taken suddenly with sharp abdominal pain, much faintness, and some flowing. The same physician was called, diagnosed neuralgia of the stomach, gave a hypodermic injection of morphine, and left her. He later saw her in several equally characteristic attacks, but failed to even suspect the real pathological lesion. Another physician was then called, who without analysis of the urine diagnosed acute nephritis. I found her almost exsanguinated, with no color in lips or finger tips, with temperature of 100° F., and pulse of 150. She was vomiting, with abdomen quite generally tympanitic, while the uterus was large and soft, with a fixed mass to the right of it. Her condition was such that I feared to operate lest she die on the table, and as there seemed to be no fresh bleeding going on, deferred operation. She was removed to Harper Hospital, and heroically stimulated for three days, being watched carefully for evidence of fresh bleeding. During the night of the 10th the temperature dropped 1°, and the pulse jumped 20 beats per minute, which I regarded as indicative of hemorrhage, and operated on the morning of the 11th. The abdomen was literally full of blood clots, with a small amount of fresh blood, the tube was completely ruptured, with fetus and secundines free in the cavity. The tube was rapidly tied off and removed, the large clots lifted out, the cavity filled with saline solution and the wound closed with through and through sutures, the patient being in the operating room only 20 minutes. For some days her condition was precarious, after which convalescence was normal, and she left the hospital three weeks after operation, returning one week later because of a large swelling in the abdominal wall, which opened and discharged large quantities of bloody serum for two or three weeks. Although I was never able to find any sinus leading into the peritoneal cavity, I believed that the large amount of discharge came

from the cavity, the peritoneum having failed to fully absorb the clots left behind. The lesson from this case is a diagnostic one. The family physician first sees these cases, and should diagnose them at the first rupture, if not before, and thus prevent the serious consequences of long continued hemorrhage and low grade sepsis.

There are occasional cases of tubo-uterine pregnancy where diagnosis is impossible without opening the abdomen. My next case is of that type.

Case 4.

On May 27th, 1906, I saw Mrs. R., of Romulus, at her home. She was 31 years old, with one child aged 8, and a history of several miscarriages. Her last period was January 25th, with slight flow at the regular time for each succeeding period. After the April period she continued flowing with slight show every day, and considerable pain in the right side, never very sharp. I examined her twice under chloroform. The uterus was about as large as a child's head, with a small movable mass on the right side, seemingly distinct from the uterus. A provisional diagnosis of tubal pregnancy was made, although the fact that the history denoted a four months' pregnancy without symptoms indicative of tubal rupture made me certain of finding something atypical. A full explanation of the doubtful point in the case was given, exploratory incision advised and accepted, and on May 29th I opened the abdomen, to find the enlargement all uterine, the right cornu at the tubo-uterine junction being much hypertrophied without enlargement of the tube. From inspection it was evident that abortion of the growing fetus would soon take place into the uterus, being the direction of least resistance, and without further interference the abdomen was closed, abortion taking place within the ensuing week. This case probably began as a tubal pregnancy with placental implantation so near the uterus that development resulted in localized hypertrophy of the uterine tissue.

A case of abnormal retention of the placenta (Case 5) is, I believe, of the same type.

Case 5.

Mrs. A., aged 30, married ten years, with a history of one miscarriage soon after marriage, consulted me about December 1, 1905.

She had missed one period, and two or three weeks later had a slight flow. Gradually the usual symptoms of pregnancy developed but with the continued abnormality of a slight flowing every few days, betokening either an irregularly placed or attached placenta or an extra-uterine pregnancy. Indeed, several weeks elapsed before the developing uterus and the absence of tubal enlargement enabled me positively to exclude a pregnant tube.

As the patient was very anxious to bear a child, she willingly spent most of the time in bed until the latter part of February, 1906, the flow recurring every few days, especially after any slight exertion. She then began to flow hard, and upon examination I found a dead macerated fetus protruding from the os. The danger of sepsis from the dead fetus seemed to indicate emptying the uterus of its contents, and I returned an hour later with instruments and an assistant, Dr. W. E. Keane, found the fetus in the vagina firmly attached by the umbilical cord, but failed utterly to reach or find the secundines. The patient was anesthetized and the uterus carefully explored with curette and placental forceps, but a long vagina and a deep uterus apparently prevented my reaching the uterine cornua. Fearing to use much force in an uterus which had harbored a dead fetus for an unknown time, I irrigated carefully and left the expulsion of the placenta to the "*Vis Medicatrix Naturae*." The patient was carefully watched for evidences of sepsis, and for nine weeks thereafter. The flow soon stopped, there was no temperature or discharge, and but for the fact that the uterus remained large and the os soft and patulous, I would have doubted what I knew must be true, the retention of the placenta. The patient and friends were frankly skeptical of my diagnosis, but as there was absolutely no reason for interference I insisted upon waiting.

At the end of *nine* weeks the patient began suddenly to flow hard and in a few hours passed the placenta, which was compressed into the shape of the uterus, running to a point at one end, which appeared to have been attached partly in the tube.

I believe that the symptoms so closely simulating tubal pregnancy in the early weeks were due to a placenta attached at the tubo-uterine junction, which belief explains why I failed to reach it with curette and forceps.

Case 6. The Transmission of Syphilis.

On January 11th, Mr. A. called at my office because of pain on urination, first noticed that day, and examination disclosed a developing

urethral chancre just behind the meatus, which diagnosis was confirmed by subsequent appearance of the usual secondary symptoms. A few days before I saw him he had connection with his wife, who was then five months pregnant. On March 12th I first saw the wife, the day after the appearance of a characteristic secondary rash, and immediately put her under vigorous inunction treatment. Exactly eight weeks later the child was born. What could I expect regarding the child? Would the mother abort, or give birth to a full term dead or dying child; would the child entirely escape, or be born healthy, later to develop evidences of an inherited constitutional dyscrasia? The husband communicated the disease by one intercourse, before he had enough of an initial lesion to attract his attention, showing what other observations prove to be true without question, the early infectiousness of the initial lesion. How long a period, then, after infection of the mother before the dyscrasia would affect the child through the placental circulation, and what effect would active mercurialization of the mother after her secondary symptoms developed, have in protecting the child? These queries are unanswered in any text-book with any degree of definiteness. Until we know exactly what the specific poison of syphilis is, we must remain in ignorance of when it begins and when it ceases to act.

This baby was normally nourished and apparently healthy at birth, but when ten days old developed a small deep ulcer in the roof of the mouth, and a week later a mild iritis, the development of further symptoms being inhibited by treatment, to which the infant responds as well as the adult. Last year I saw a man who one week after a suspicious intercourse tore the frenum in connection with his wife, which had occurred not infrequently before. A guilty conscience sent him to me, but the case presented nothing but a simple laceration of the skin. One week later, however, the simple laceration had become a typical chancre. Inasmuch as it has been my custom never to diagnose syphilis from the appearance of the initial lesion, I kept this man under close observation, without treatment, for four and one-half months, when he brought his wife in with an unmistakable late secondary group of symptoms. This man went four and one-half months after the development of a typical chancre without any secondary symptoms whatever, yet infected his wife before the appearance of the initial lesion.

Should any of you complain that syphilis is not "Gynecology or Obstetrics," I reply that sooner or later it may be, and besides it is too late to object, for I am through.

The Journal of the Michigan State Medical Society

All communications relative to exchanges, books for review, manuscripts, advertising and subscriptions should be addressed to B. R. Schenck, M. D., Editor, 502 Washington Arcade, Detroit, Mich.

The Society does not hold itself responsible for opinions expressed in original papers, discussions or communications.

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NOVEMBER

Editorial

Medical Defense. The provision of defense against civil suits is being provided by a number of the state medical societies, and is unquestionably meeting with great success. In every instance the number of suits has decreased since the societies have taken over the defense of their members, showing that its establishment has been a potent prophylactic against these unjust persecutions. The time has come for our own state society to study the problem and provide, if it seem feasible, some practical plan for the defense of our members.

The subject was discussed by the house of delegates at Manistee, and a committee of five to study it was authorized. President Lawbaugh has appointed Dr. F. B. Tibbals of Detroit, Dr. A. M. Hume of Owosso, Dr. A. H. Rockwell of Kalamazoo, Dr. W. J. Dubois of Grand Rapids, and Dr. A. W. Hornbogen of Marquette. The chairman, Dr. Tibbals, has studied the subject thoroughly and to his efforts Wayne county owes her successful plan. Originally in Wayne, a defense league with members who were in good standing in the county society was established. Later every member of the society became a member of the league, one and one-half dollars of his dues going yearly into the defense fund. This feature of the work

of the Wayne County Society has been successful beyond the fondest hopes of the organizers and the fund now contains over fourteen hundred dollars.

It is now proposed to expand, so that every member of the state society will, in case of need, be defended, provided the membership throughout the state desires it and so votes. The committee, be it understood, is appointed only to study the question, to propose some plan and to ascertain the sentiment throughout the state regarding it.

The plan proposed is this: The first year a special assessment of \$3.00 is to be paid. This will put all members on the same footing as the members of Wayne. After the first year dues are to be increased one dollar, this one dollar (collected with the county and state dues as at present) to be sent by the county secretary with the state dues and set aside in the special defense fund. Every member in good standing will then be defended in any suit which may be brought against him, either by his local attorney or by the firm of attorneys retained by the society. The control of the fund will be in the hands of a committee, either elected by the house of delegates or appointed by the president, some provision for oversight by the council of the state society being provided. These details remain to be worked out.

It will be necessary for our by-laws to be amended before any work of this kind can be instituted. This can only be done by the house of delegates. The committee, however, desires as much data as possible before the meeting of the council in January, and wishes the matter to be brought up before every county society as soon as possible. If a majority of the membership favor the general plan, the details will be worked out and placed before the council. The councilors will then have enough information to act intelligently in their rec-

ommendation. If it is decided to recommend some plan, the council will submit all the details to the county societies, the members of which will have a full opportunity of discussing it and instructing their delegates.

This is the most important matter which has come up in some years. It affects every member. Every member should know about it and form his own opinion. It means a raise in dues of \$1 per year (\$3 the first year), but it also means the cheapest possible insurance against a misfortune which is liable to strike any one of us tomorrow. It is real *insurance*, for experience has shown that it is prophylactic. If it fails as a prophylactic, it is a most potent remedy.

It is therefore proposed that at the next meeting of each county society, the general plan of medical defense (with a \$3 assessment in 1910, and a \$1 increase in dues thereafter) be discussed and voted upon. Your county officers have been sent a communication on the subject.

This vote is not final. A final action can be taken only by the House of Delegates.

Any one desiring further information on the experience with medical defense in other states, in city medical societies, or in Wayne county, may obtain it by addressing the chairman of the committee at 99 Fort street west, Detroit.



The Detroit Times is to be congratulated on the stand which its owners have taken on the medical advertising question. On the occasion of the celebration of the eighth anniversary of its nativity the editor, under the caption "Would You Continue a Policy That Was Costing You Good Money?" graphically shows some of the offensive advertisements which are appearing in the *News*, *Journal*, and *Free Press*. For the past two years the *Times* has refused, to this

class of advertisers, space which amounts to several thousands of dollars annually. This sacrifice to principle, when made by a comparatively young paper, and one which has come into a field in which competition has been keen, is to be especially admired and commended.

In our May issue we called attention to the number of objectionable advertisements published by the Detroit papers and stated that from a comparison made at the time, the *Free Press* was the cleanest of our sheets. It probably is cleaner than the *News* or *Journal*, but an injustice was done the *Times*, for it is not only the cleanest in Detroit, but is also the only paper which one can take into his home without the danger of exposing the members of his family to a lot of half-veiled obscenity. Fortunately the unsophisticated do not know the meaning of these advertisements—for example that "Brou,"—a prompt relief for the most obstinate case" means an injection for gonorrhea, or that the ever recurring phrase "contagious blood poison," means syphilis, or that "Chichester's pills for irregularities" mean (or intend to mean) abortifacients. Perhaps, however, it is *unfortunate* that these things are not better understood, for were they, possibly some of our prominent business men would prefer not to have their names printed next to such abominations.

And the *Times* asks, "Does it pay?" going on to show that it does not, financially. It has not gained in legitimate advertising what it has lost by having a principle and sticking to it. Neither has it gained in circulation. "It has inspired some good words by discerning readers whose high opinion is worth seeking; and there have been praiseful and hopeful expressions in the trade press and in letters from our magazine friends and certain large advertisers. No doubt it has appealed to many subscribers and advertisers who have not put their appreciation into words." This is a strik-

ing commentary on the fact that the public has not been aroused on this question and will not be aroused until there are more papers like the *Times* which will be willing to forego sordid gains and tell what these "ads" really mean. Patent medicines of the Peruna type have been pretty fully exposed, but as yet little general attention has been given to the rottenness underlying those of the type of the Chichester pills and the whirling spray.

But the editor of the *Times* is optimistic. He has experienced a "satisfied conscience" and "an increased joy in the business." He believes that it is yet too early to tell whether or not his policy will pay; that clean newspaper-making will come into its own in good time; that tainted advertising and everything that casts suspicion upon the sincerity of the newspaper's claim that it is a public educator and a force for righteousness must go. This admirable policy of the *Times*, despite the financial loss, is to be continued and should receive more support from a community such as Detroit, nine-tenths of whose citizens would applaud Editor Schermerhorn if they understood the full meaning of his fight.

Book Notices

The Pancreas: Its Surgery and Pathology. By A. W. Mayo Robson, D. Sc. (Leeds), F. R. C. S. (Eng.) of London, and P. J. Cammidge, M. D. (Eng.) D. P. H. (Camb.), of London. Octavo volume of 546 pages, fully illustrated. Philadelphia and London. W. B. Saunders Company, 1907. Cloth, \$5.00 net.

This volume is one of the most important contributions to medical literature of the year. Diseases of the pancreas have been more obscure than those of any other abdominal organ and have been the latest to be elucidated, probably because of the fact that the pathology of the pancreas must be studied ante mortem. Post mortem findings are unreliable, for immediately after death putrefactive changes take place from auto-digestion, thus obscuring the true picture. It re-

mained therefore for the surgeon to work out many of the problems of pancreatic pathology. Robson has been a pioneer in the field.

The symptomatology and pathology of the gland are very closely allied to its physiology and anatomy, and the latter are so much more easily understood by reference to comparative anatomy, that the authors have first taken up "Comparative Anatomy," "Anatomy," "Embryology," "Anatomical Anomalies," "Surgical Anatomy," and "Histology," each being treated in a separate chapter. A full discussion of the function of the islands of Langerhans is given, the authors apparently supporting the theory that they are concerned in carbo-hydrate metabolism.

The chapters on "Fat-Necrosis," "Diabetes," and "Chemical Pathology" contain many important points, that on diabetes being especially valuable as a concise review of the much discussed question of the pancreatic origin of the disease.

The last eight chapters take up the questions of symptomatology and treatment of the injuries and diseases of the gland. It is to be said that the general profession has rather meagre knowledge concerning these most important affections and that nowhere can the necessary knowledge be better obtained than in this book. The authors have collected the best of the vast literature on the subject and, after classification, have extended it by additions from their own large experience. Many case reports are included. The well known Cammidge Reaction is given first hand, but the authors state that experience in its use is necessary.

The book is well illustrated. A most valuable feature is a bibliography at the end of each chapter, making the volume an encyclopedia of information on all subjects concerning the pancreas.

This is one of the books which every physician who wishes to progress should buy and study.

Medical Greek. A Collection of Papers on Medical Onomatology and a Grammatical Guide to learn Modern Greek. By Achilles Rose, M. D., 16mo.; 262 pages; cloth, price \$1.00. Peri HALLADS Publication Office, 87 Frankfort St., New York, 1908.

The author of this book has a mission, and that is to improve medical terminology, which he shows is becoming each year more erroneous. He believes that we are entitled to expect physicians to use correct language (especially those who write), and as the first essential for a proper vocabulary is the use of correctly formed technical

terms, he urges the study of Greek, "more beautiful and noble than any other language."

The book comprises a series of papers some of which have been previously published. In one of them, the need of a universal scientific language is discussed and Greek advocated because no rivalry need be considered; it is a living language, spoken by 7,000,000 people with few changes since classical times; it is rich and musical; it is precise; it has already given birth to thousands of words in all languages and can express clearly every modern idea; it lends itself readily to combinations; because it is immortal. The author's arguments appear to us to be sound.

Another paper on "Medical Slang" is very interesting. The absurdity of such words as "atonia," "psychosis," "cophorectomy," "nephrokapsectomy," etc., is shown. An originator of an operation coins a word from the Greek without consulting a Greek or even a lexicon; the words soon get into our literature and the result has been that out "medical onomatology is to a great extent a corrupt, illiterate, ridiculous and absurd jargon."

Rose advocates the establishment of a classic Greek nomenclature. This might be done by a committee from the Medical Society of Athens working with philologists. The incorrect terms already in use might be corrected and care taken in the formation of new words. Dr. Rose has already published a list of incorrect medical terms together with the corrected forms. He believes that reformation is possible. Desirable as it is, we believe it impossible, simply because few medical writers are sufficiently interested.

The book is an interesting one, and the author's mission a worthy, although we fear impractical, one.

The Baby. Its Care and Development. For the Use of Mothers. By LeGrand Kerr, M. D., Professor of Diseases of Children in the Brooklyn Post-Graduate Medical School. Cloth, \$1.00. A. T. Huntington, Publisher, Brooklyn, 1908.

Many books of this kind have been published, but most of them have certain objections which prevent the physician from placing them in the hands of the expectant mother. This one has but few of the objections; practically but one, and that is the list of alarming symptoms found on page 10. This is our one criticism. Otherwise the pages are replete with useful points well set

forth. The idea of classifying these points by months is a good one, and the teaching is sound.

It may be safely recommended to any intelligent mother.

County Society News

Third District.

The Third Councilor District of the Michigan State Medical Society met in Battle Creek, at the Sanitarium, on Oct. 6th, where the following program was given:

9 a. m.—Clinic by Dr. Wilfrid Haughey, Dr. W. H. Riley, Dr. A. S. Kimball, Dr. W. H. Haughey, Dr. W. F. Martin, and Dr. C. E. Stewart, the later presenting a man recovering from "sleeping sickness" of South Africa. This man also has an infection of *filaria sanguinis hominis*. Both the *filaria* and the *trypanosome* were shown under the microscope.

2 p. m.—General meeting:

Call to order by the councilor.

Introduction of chairman, Dr. Samuel Schultz, Coldwater.

Address—Proteid Poisons, Dr. Victor C. Vaughan, Ann Arbor.

Question—Shall We Organize a District Society?

Dr. Vaughan's address, needless to say, was a masterpiece, dealing as it did with his recent work on the splitting up of the proteid molecule into its poisonous and non-poisonous parts. By his work on these subjects Dr. Vaughan is enabled to explain many points that have been bothering the medical profession for years, chief among which is the cause of sudden death following the injection of diphtheria antitoxin. Many of these sudden deaths have been reported during the past year, and we are now not only given an explanation of this phenomenon, but are shown how to avoid it. Briefly the explanation is as follows: The sudden death is caused from the fact that the patient has been "sensitized" before to the horse serum. This sensitization may have been a prophylactic dose given some months or years before. This dose has rendered the patient extremely susceptible, and the curative dose, when given, produces the poison and death, by

the proteids of the horse serum being split up into their poisonous and non-poisonous parts. This result can be avoided by giving only a very small amount of the serum at the first dose, when there is a history of a previous use of horse serum. If there is no reaction, or only a slight one, then after a few hours the full curative dose may be given with impunity.

Under the question about organizing a District society, those in attendance at this meeting voted unanimously to do so. A committee was appointed to perfect the organization, who brought in the following report:

1. This society shall be known as the Third Councilor District Medical Society, of the State of Michigan.

2. All members of the component county medical societies shall be members of this society.

3. The president and secretary of the component county societies in the order, Eaton, St. Joseph, Calhoun, Branch, shall be the presiding officers in different years, the president and secretary of Eaton County Medical Society presiding in 1909.

4. There shall be one meeting each year.

5. The councilor, president and secretary for the year shall determine time and place of meeting, provide program, and make all necessary arrangements, appoint committees, etc.

6. It shall be the duty of the president and secretary of each county medical society to secure at least one paper from their county for each meeting of the district society.

7. The expenses of the district society shall be provided by each county medical society proportionately to its membership.

P. H. QUICK, Eaton.
DR. WETMORE, Branch.
L. L. CAHILL, St. Joseph.
A. J. ABBOTT, Calhoun.
C. E. STEWART, At Large.

This report was accepted and adopted unanimously.

At 3:30 p. m. the meeting divided into two sections, at which the following program was given:

Section A—Samuel Schultz, chairman; Geo. C. Hafford, secretary.

Paper—A Plea for Better Therapy, C. S. Sackett, Charlotte.

Paper—Some Observations on the Etiology and

Treatment of Nasal Catarrh, J. F. Byington, Battle Creek.

Paper—The Frontal Sinus, A. J. Abbott, Albion.

Section B—P. H. Quick, chairman; Wilfrid Haughey, secretary.

Paper—Nostrums and Proprietary Preparations, W. T. Dodge, Big Rapids.

Paper—Lymphatic Leukemia, With Report of Three Cases, Wilfrid Haughey, Battle Creek.

Paper—Modern Treatment of Suppurative Peritonitis, Frank C. Kinsey, Three Rivers.

These papers all received a hearty discussion, especially the papers of Dr. Dodge, on Nostrums, and the one by Dr. Kinsey on Suppurative Peritonitis.

In the evening the society was treated to a complimentary banquet by the Sanitarium management. Dr. B. H. McMullen, of Cadillac, acted as toastmaster. Toasts were responded to by Drs. A. W. Alvord, Battle Creek; A. P. Biddle, Detroit; W. H. Haughey, Battle Creek; A. E. Bulson, Jackson; Eugene Miller, Battle Creek, and W. J. Kernachan, Florence, Alabama.

WILFRID HAUGHEY,
Chairman Committee.

Antrim.

The Antrim County Medical Society met at Central Lake, Oct. 7, at 8 p. m., with a large attendance of members from Elk Rapids, Bellaire, Mancelona, Alba, and Central Lake.

Hon. C. D. Bailey, of Mancelona, favored the society with a very interesting address on Medical Jurisprudence. The judge has kindly consented to attend the January meeting in Mancelona, when he will deliver another address which will interest the medical profession.

Dr. H. A. Stewart, of Alba, gave an instructive paper on The Treatment of Exophthalmic Goitre, in which he gave a record of a number of cases treated with ergotin and quinine with good results. This paper brought forth a good discussion.

At the close of the meeting a banquet, very much enjoyed by all, was served at the "Tavern," by Host Fred Fisk. Judge Bailey, in his usual pleasing manner, acted as toastmaster.

The society is doing good work in the county

and every physician, with the exception of two, is a member.

L. L. WILLOUGHBY,
Secretary.

Clinton.

The annual meeting of the Clinton County Medical Society was held in St. Johns, Oct. 1, 1908.

The meeting was called to order with ten members present. Election of officers resulted in re-election of all the old officers—J. E. Taylor, president; W. H. Gale, vice-president; W. A. Scott, secretary and treasurer.

A resolution was passed by unanimous vote that members of the society make no life insurance examinations for old line companies for a fee less than five dollars.

The following resolutions relating to the death of Dr. S. E. Gillam were adopted and ordered to be spread upon the minutes of this meeting:

Whereas, The great Ruler of the Universe removed from our midst our esteemed brother practitioner, Dr. S. E. Gillam, and,

Whereas, Dr. Gillam was one of the most active members of the present Clinton County Medical Society and its first president, during which time he contributed many valuable papers (pertaining to both medicine and surgery) of great interest to his beloved profession, and,

Whereas, He was a man of marked judgment and great ability which, together with his large experience, made his opinion of special value in his profession, and,

Whereas, His arduous professional life drew largely upon his physical endurance until he died suddenly at the zenith of his usefulness.

Therefore, be it Resolved, That the removal of such a man from our council leaves a vacancy and a shadow that will be deeply realized by all the members of the society.

Resolved, That with deepest sorrow for the bereaved wife, relatives and friends, we extend our heartfelt sympathy in this their affliction, and that a copy of these resolutions be forwarded to the family, the public press, and the medical press, and, be it further

Resolved, That these resolutions be spread on the records of the Clinton County Medical Society.

O. B. CAMPBELL,
M. WELLER,
Committee.

Houghton.

On Oct. 5, Houghton County Medical Society held, with the exception of the one following the election of Dr. Lawbaugh to the presidency of the state society, the largest regular meeting since its foundation. At this meeting the following were elected to membership in the society: Drs. A. J. Jones, Painesdale; C. E. McKinnis, Dollar Bay; A. A. Metcalf, Hancock.

A paper on Tubercular Peritonitis, by Dr. Lawbaugh, proved to be a thoroughly practical one, although at the beginning the doctor stated that, owing to the short time allotted, he would be unable to enter minutely into the details. He stated that among other things which had come up in his experience, the proportion of males to females with this disease had been one to four.

Following Dr. Lawbaugh, Dr. Gregg, of Tamaraack, exhibited, by means of the cabinet magnifier loaned by the C. and H. Hospital, about 75 X-ray plates, explaining each very clearly. Dr. Gregg has been devoting a great deal of time to this work, and the plates were all most clear and distinct. The exhibition with other plates from the C. and H. and Copper Range Hospitals proved to be one of the most instructive ever given before the society. W. D. WHITTEN,
Secretary.

Huron.

The Huron County Medical Society held its regular annual meeting Monday evening, Oct. 12, at Bad Axe. Dr. A. M. Francis was re-elected president; Dr. M. C. McDonald, vice-president; Dr. D. Conboy, secretary-treasurer; Dr. J. D. Lackie, delegate; Dr. B. Friedlander, alternate. Dr. F. B. Sellars read a paper on Theology From a Medical Standpoint, and Dr. C. B. Morden read one on Case of Lumpy Jaw in a Farmer. Both papers were thoroughly discussed. One-third of the county "force" were present.

D. CONBOY, Secretary.

Mecosta.

The Mecosta County Medical Society has elected officers for the following year, as follows: President, F. C. Terrill; vice-president, A. A. Spoor; secretary-treasurer, Donald MacIntyre, all of Big Rapids. DONALD MACINTYRE,
Secretary.

Monroe.

The officers of the Monroe County Medical Society for the coming year are: President, S. V. Dusseau, of Erie; vice-president, J. J. Valade, Newport; secretary-treasurer, C. T. Southworth, Monroe.
C. T. SOUTHWORTH, Secretary.

Montcalm.

The annual meeting of the Montcalm County Medical Society was held at Stanton, Oct. 8, 1908. Officers for 1908 were elected as follows: President, Dr. John Avery, Greenville; first vice-president, Dr. F. R. Blanchard, Lakeview; second vice-president, Dr. W. P. Gamber, Stanton; third vice-president, Dr. Jay O. Nelson, Howard City; fourth vice-president, Dr. James Purdon, Edmore; secretary-treasurer, Dr. H. L. Bower, Greenville.
H. L. BOWER, Secretary.

**Proceedings of the First Annual Meeting of the
Association of County Secretaries of the
Michigan State Medical Society.**

The initial meeting of the county secretaries was held at the Hotel Cadillac, Detroit, September 30, 1908.

Present: R. C. Perkins, Bay; Samuel Schultz, Branch; A. S. Kimball, Calhoun; A. H. Burseson, Eaton; B. E. Burnell, Genesee; Samuel Osborne, Ingham; C. S. Cope, Ionia; R. Grace Hendrick, Jackson; G. F. Inch, Kalamazoo Academy; F. C. Warnshuis, Kent; J. C. Johnson, Lenawee; C. T. Southworth, Monroe; H. L. Bower, Montcalm; V. A. Chapman, Muskegon; C. D. Morris, Oakland; A. C. MacKinnon, O.M., C.O., R.O.; E. D. Kremers, Ottawa; L. C. Kent, Presque Isle; J. W. Scott, Sanilac; C. C. McCormick, Shiawassee; A. L. Callery, St. Clair; W. C. Garvin, Tuscola; J. W. Keating, Washtenaw; G. H. McFall, Wayne. Council, L. J. Hirschman, A. E. Bulson, W. H. Haughey, R. H. Spencer, C. B. Burr, A. L. Seeley. State Secretary, B. R. Schenck; Associate Editor, C. H. Oakman; H. M. Rich, chairman Program Committee, Wayne; F. B. Tibbals, Chairman of State Committee on Medical Defense.

Dr. F. R. Green, of Chicago, assistant to the secretary of the American Medical Association, was guest of honor.

Session called to order at 2:30 p. m., State Secretary B. R. Schenck in the chair.

Dr. Schenck: It is hardly necessary to state again the object of our meeting here today. As most of you know, a number of the state societies have inaugurated organizations of their county secretaries, and in a number of states they have had some most interesting and profitable meetings, notably in Ohio, Indiana, and Pennsylvania. Judging from the reports in the journals, these state societies and county societies have been immensely influenced for the better as a direct result of these conferences.

Some eighteen months or two years ago, Dr. Manwaring, the then secretary of the Genesee County Medical Society, wrote an open letter in the Journal advocating the formation of such an association here in Michigan. I am sorry to say that he did not receive strong support at that time, but Dr. Warnshuis, of Grand Rapids, was exceedingly enthusiastic, and I want to say that our meeting today is largely the result of the enthusiasm and interest which Dr. Warnshuis has taken in this matter, aided by Dr. Inch, another member of the Committee on Arrangements. At Manistee there were seven or eight secretaries present, and we had a conference at which this meeting was planned.

Later in the afternoon it is probable that an organization will be formed, but in the meantime we should elect a chairman and secretary of this meeting; therefore, I will call for nominations for Chairman of this afternoon's meeting.

Dr. F. C. Warnshuis, of Kent, was elected chairman and Dr. G. F. Inch, of the Kalamazoo Academy, secretary.

Chairman: In arranging this program we thought it well to start off the meeting with some one who could strike the key-note of the meeting, and in looking around we think we have found one who can do so. We will now listen to an address by Dr. A. E. Bulson, Councilor of the 2nd District, Jackson, entitled:

"Medical Organization—What it has and should mean in Michigan."

Dr. Bulson: Mr. Chairman and Secretaries of the Michigan State Medical Society. In the first place, I wish to congratulate you on assembling here under the auspices of the State Society, for it seems to me that it portends a work that is far reaching, from the fact that the secretaries come in touch with every part of the state or-

ganization. It ramifies to every part of the state, and your councils are on the same line as the Council of the State Medical Society. Therefore I trust that this beginning will result in a great amount of good, and push the interests of our state organization to a final completion.

What has the state organization accomplished? This is a broad question, and as I understand that this is simply an introduction of topics, of course I must be brief. You will remember that in 1902 our organization had been in existence more than 40 years—the Michigan State Medical Society. We had never exceeded in membership 635, although there were eligible to membership in the state of Michigan about 4,000 doctors. The membership was confined largely to the cities, for members of the rural districts scarcely ever attended the state meetings. It was confined to a mere handful of men, and yet they did noble and grand work, and they are to be congratulated. They have left a legacy with us of honor to the profession.

In 1902, after recommendations from the American Medical Association, at their session at St. Paul, for reorganization, the national body recommended state organization. Dr. Connor, at that time, was President of the Michigan State Medical Society. He came home full of enthusiasm. He appointed a committee to draft a constitution and by-laws, which were to be presented to the State Society at Port Huron. This committee drew up a basis of organization, constituting a central body represented by membership in proportion to the membership of the County Society, the county society being a unit, and with one delegate for fifty or more, or a portion thereof, to make up a House of Delegates of the State Society and a council composed of one man from each congressional district. The Council was a new feature in organization, up to that time, Michigan being one of the first states to reorganize on this basis, and I remember Dr. Connor saying, when he was called upon after the report of the committee was given: "There is nothing for me to say; Michigan is taking the lead, and we hold the banner if this is carried out." Subsequently other states adopted the council as a part of their organization. The first year, the members of every county simply put their shoulders to the wheel, and as one man worked heroically and energetically, so that at the close of the fiscal year we had more than 1800 enrolled as members. This year has been a test, in one sense, of the wisdom of that plan

of organization, and certainly it has proven that it was a move in the right direction. I do not remember the membership now, but it is something over 2,000. We increased it from 1,800 to something over 2,000. But I want to say to you that we are still far from reaching the goal of our ambition. We have only about 30% of the eligible membership of the profession of Michigan enrolled in society work, therefore you see that there is a broad field before us yet to encompass; there is much to be done. But before I pass that part of the discussion, what have we accomplished by this organization?

In the first place, there has been a spirit of professional unity, which has never existed before. The petty selfishness which was so common in the profession is disappearing. We begin to realize that we stand as one solid body for the uplifting of humanity. If there is anything to be deprecated, it is this selfish spirit which has long existed in the medical profession. A unity of purpose shows that we are standing on the same level; that our interests are one. We can leave our patients to our brother practitioner and feel perfectly safe. Scientifically we have enlisted a large class of young men out of college who are taking hold with energy and zeal, who are making our work a success. It is to be regretted that some of the older members of the profession are lukewarm; some of the old respected members of the profession who have stood as beacon lights for all these years are not in sympathy with the move. And why? Professional ethics comes in right here. I have talked with a number of these old members and they cannot forget the Hippocratic oath and a whole lot of other things that are more or less nonsense. They don't believe in affiliating with men who have been educated in other lines of medical practice. The result is, they are remaining out and lost to themselves and to the society, and we need their co-operation. I don't know as the time will ever come when some of the older members will change their mind in this respect. Nevertheless, medical organization in this country has come to stay, and it is going to pile up (Applause.), an imminence of glory to the work, because it is certainly the greatest and most effective medical organization in the world. Scientifically we are enlisting a membership that is doing the great work of the organization; young men, right from their colleges, with all the latest scientific advancement, are unfolding it to those of the older members who

attend these meetings, making a post-graduate school of every county society in the state.

I remember once Dr. Vaughan and myself, while riding in a car, were speaking about advancement in medical education, and I made the remark, "Quite a contrast, Doctor, from what it was when you and I attended school." "Yes," he answered, "I attended two terms of five months, and graduated." I said, "I attended two terms of five months, on which I graduated." Now it is expected that you will attend at least four years, and later it will be made compulsory to six years. That is one of the benefits of organization.

Medical organization in our state has put us into one big body, where we can put hands on the lever and ask our members to support things in the interest of the profession. Don't misunderstand me, I speak of the interest of the profession in the broad term, meaning the interest of the community. Whatever interests us as physicians interests the community as well, and therefore the bills that have passed our legislature and those pending in other states are as directly beneficial to the community as they are to the physician himself. While there is an impression among the laity that our legislation is all especially to advance our particular interests, I am glad to say that by education they are finding out that we have a broader sphere of work than simply the spirit of selfishness in building up our particular craft. Michigan has had one of the best medical laws of any of the states in the Union, and it is brought about largely by co-operation of the profession. While quackery exists, and always will, yet there is a restraint placed upon it. I am sorry to say that men who have been regularly educated hold themselves aloof from the profession, simply from mercenary motives—nothing else—to bring in the shekels, but that is an exception. We are rid of the great army that used to flood our state, and that is because of organization.

Another thing that we have before us at the present time is the optometry bill. Two years ago there were committees appointed to appear before the committee on legislation that has this bill in hand, opposing it on scientific grounds. A man spends two or three months and receives a diploma, and having it recognized by state authority, can go out and practice upon the community as an oculist. Because he takes that distinction, in one sense, he claims that he is a refractionist, and by that he takes the stand side

by side with the oculist, a man who has spent years of labor and understands the pathology and conditions demanding the adjustment of glasses, yet our state legislature proposes putting him side by side with that man, recognizing the optometrist by law. This we opposed, and I believe the profession in the state will oppose it when it comes up at the next legislature. Every state in the Union has this to contend with. It is a question that has to be settled by law, and in the name of common sense let us, as physicians of the state of Michigan, stand by the dignity of the profession. Why, nearly every day in my office I have people speaking of opticians as Dr. so and so, I say, "Are they doctors?" "Why," they answer, "they are the same as you are." I say, "Perhaps so. I spent four years. I have taken several special courses, and they have spent a few months to qualify themselves to practice their art." "But I did not know that." It is a matter of education. The physicians are the ones who are to educate the people. When the physician sends his patient to an optician he is doing his patient an injustice. Sometimes the oculist may be engaged in his work, and cannot accomplish all that is wanted. Send it in a live channel, to men who have spent their life's work in preparation to prescribe for that patient. I am glad to say that these things are changing too. It is a matter of evolution, and before many years the people at large, because of organization, will know the difference between an optician and an oculist. I want to say right here, this matter is going to be fought out in the legislature, and you in every community will have an influence with your representative, and in the name of all that is right, influence him by your interest to vote against recognizing optometry as scientific or legal.

Now I come to a matter that I think of vital importance—that is, that every medical college should teach medical ethics. It is a question that I think at the present time is of paramount importance. In every state university there are a large number of young men, bright students, who stand willing to perform their part of the work, but they are totally ignorant in regard to medical ethics; therefore, if the schools will take this matter up and give them lectures on medical ethics; what it is; what to expect when they get into practice, they will be accomplishing a great good for the medical profession of our states: In a great many of the smaller towns, they have established post-graduate work; who

ever heard of post-graduate work in county societies until reorganization of the profession, but it has come to stay. It is a school of education for men who scarcely ever find the time to go away to distant cities to avail themselves of this work, therefore, one of the grand things of the profession is the establishment of post-graduate work. But I am sorry to say that it is limited in a certain line from the fact that in the cities the physicians attend, but the country physicians simply attend their quarterly or monthly meetings, and yet get a little good from it. However, the city physicians especially derive the benefit, because they hold meetings every week which are generally largely attended. I think perhaps in all of the post-graduate classes that have been established there is a large per cent who attend those meetings and do their particular work, but I am sorry to say that the country men are not in accord with it. How shall we reach the country physician with post-graduate work? This is the next important thing for us to decide. I have been reading some of the discussions in regard to this—that correspondence schools be established. The American Medical Association is possessed of a great printing plant for our organization, and has all the paraphernalia and everything necessary to send out their pamphlets broadcast throughout the land to every man. If need be, a man can carry this out in his own home without going to Battle Creek, Lansing or any other place; it systematizes a plan, and I believe it is a feasible one. There are but few of the men today but what have a certain professional ambition, and with this plan laid out, at his leisure he can take that and he can work it out. His practice gives him clinical experience, and in that way it keeps him in touch with the post-graduate work of the cities. There must be something done in this line for the country physician.

I do not think I will extend my remarks any further. I want to say, however, that I for one feel proud of the work that the reorganization has accomplished. I believe we have as intelligent and as faithful a set of workers as any state in this Union. We will take no second place with any of them. While there are fields for broadening our sphere of usefulness and making it better, yet we stand shoulder to shoulder with the profession of this country, and by this organization completing its work, getting in sympathy with it as you all will, coming in contact, you will form professional friendships that

are going to be a mighty factor in carrying on the work in these counties.

I have been on the Council ever since the reorganization of the Michigan State Medical Society, and I want to say to you that I never have met a grander set of professional fellows in my life than those members of the Council, and by this association it makes us feel as good as brothers. I say to you, go on with this organization, and help us in the Council, and we will help you.

Chairman: The discussion of Dr. Bulson's remarks will come under some of the other subjects before us this afternoon, so we will pass that on our program and listen to the next paper, which is a part of a Symposium Program, the first section being "**Scientific Work**," by Dr. C. S. Oakman, Chairman of the Program Committee, Wayne County, 1907-'08.

Dr. Oakman: The Wayne County Medical Society is so large that the secretary's duties are very arduous and hardly allow him to attend to the details of program-making. Therefore a special committee is appointed, consisting of the two secretaries of the special sections, and a chairman, chosen by the president. This chairman is responsible for every thing concerning the planning and execution of the weekly programs; he may divide the labor as he chooses with the two other members of his committee, and he also usually keeps in close touch with the president, whose policy may materially affect the tenor of the meetings. This arrangement is recommended to any other society whose secretary is too busy to give the matter adequate attention.

It goes without saying that attractive programs are necessary for the success of a society; the practitioners of any county may be whipped into line for membership, the dues may be efficiently collected, and the officers wisely chosen, but the meetings will not be well patronized unless particular pains are taken with the program.

Frequency of Meetings.

The frequency of the meetings of any medical society should depend upon the number of active members who are willing to contribute. If programs are too numerous there will be too great a demand upon willing participants; if they are too few, the interest will wane. A happy mean must be found between these two extremes, and it should be the business of the officers to watch closely the effect of any given policy.

Judicious inquiry among members will usually elicit criticism and helpful suggestion; this is much better than to plunge ahead in blind confidence until dissatisfaction is openly manifested.

Subjects of Papers.

The subjects of medical papers should be varied; in order not to invite repetition of the same or similar topics, the general scheme of topics may be mapped out for the season. There are two ways of getting essays; one is to ask for volunteers to read on whatever subjects they like; the other is, to ask certain desirable men to read, either on specified subjects or ones chosen by themselves. If only the first method is used it may happen that the series of essays will not include the best men; if only the second method is used, some one will feel disgruntled at not having a chance to read. Therefore it is expedient to ask papers from certain men who are sure to command attention, and to fill up remaining places on the programs by calling for volunteers. It is also a drawing card to have occasional papers by well-known men from neighboring or distant places.

It is extremely difficult to lay down any rules for the choice of subjects, because conditions vary so much in different communities; in one town scientific work may command such attention that technical papers prevail; in another town technical papers might not be at all advisable. Generally speaking, a paper is valuable in proportion to the information it conveys. If it is an obvious rehash of accessible text-book platitudes, it is hardly worth while, unless redeemed by exceptionally good delivery. Some men have a grace of diction and charm of manner which decorate a most inferior contribution. On the other hand a really worthy essay can be spoiled by lame delivery. It will usually be found that original work forms the basis of the most useful essays; that work may concern technical investigations, diagnostic measures, clinical observations; it may have been carried out in one's own laboratory, or in one's practice, or in post-graduate study, or foreign clinics; it may be a recapitulation of work that one has seen some other man do. In nearly every community one physician or another makes a pilgrimage to larger medical centers and such a man ought always to bring back information that will make an interesting essay.

Next to original work, probably the most

useful papers are case reports and therapeutic abstracts. Whenever a paper can be illustrated by lantern slides, drawings, photographs, exhibition of patients, specimens, microscopic slides, instruments, or apparatus, it gains greatly in interest. Programs are also pleasantly varied by an occasional topic such as medical history or biography, ethics, local professional problems, institutional management, and those by-paths of medicine which are so graced by men such as Osler.

Length of Program.

The length of the scientific program should be carefully watched by the committee in charge. If a society meets often, the program should be short; if it meets but seldom, pains should still be taken to avoid excessive length. It is very irksome to listen too long, and if the audience becomes restless the essayist usually feels it keenly. If for any reason several papers must be grouped in one session, the subjects should be varied, or else presented by men capable of holding interest, and place the best readers last. Symposia are a favorite means of breaking up a subject into short addresses; a subject like tuberculosis can be assigned to four men, each to give a ten-minute talk on some separate phase; for instance, one will take up pathology and bacteriology, another diagnosis, another public and individual prophylaxis, another treatment. In any series of several papers, the time should be carefully calculated in advance by the committee, and the writers urgently requested not to exceed their allowance. The balance between the scientific and social parts of programs ought to be regulated according to circumstances; usually, of course, the scientific part had best come first. An hour divided between three short papers is generally more profitable than one long continuous address. The best medical essays are nearer twenty minutes in length than an hour, and with few exceptions the man who covers a subject in fifteen minutes has impressed his points better than the man who uses a half-hour for the same purpose.

Incidentally, the presiding officer can assist immeasurably by impartially keeping readers and discussers to a time limit previously agreed upon.

Discussions.

It is frequently said that the most instructive part of a scientific program is the discussion that

follows an address; this is not always true, for sometimes the participants are not prepared for the subject, or wander away from the point in hand, or talk to no purpose except to be heard. The plan is often adopted, and wisely, of asking one, two, or three men in advance to discuss a given paper; in this way the discussion will be opened by men who are presumed to have thought about it, or read up on it, thus affording new ideas, or contradictions, or fresh points of view. Then the subject can be thrown open to general debate, or the presiding officer can call on particular men to speak. If the attendance at a meeting is at all numerous, discussions should be limited; the formal participants may be allowed seven or five minutes, the rest five or three. A rule once made avails only so long as impartially enforced. This is one of the greatest difficulties in medical societies; its observance is likely to cause offense, and its lapse will permit those long weary harangues which are expected from certain men in nearly every community. In these days of American concentration it is still hard for many people to realize the demand for "multum in parvo," rather than "parvum in multo."

Post-Graduate Courses in County Societies.

In the last two years a new feature of the county medical society has arisen in the local post-graduate work; this may supplement or in part supplant the usual formal meetings, and is to be encouraged. It serves the purpose of instruction far better than the average medical paper and loses none of the social atmosphere of the traditional meeting. An outline of study can be taken from the skeleton published in the J. A. M. A. by Dr. Blackburn of Kentucky, or independent plans may be formulated, according to conditions.

Planning of Programs.

There are a few points in arranging for scientific papers that should always be observed. First, plan far in advance. If you intend to ask a man for a paper, give him at least two months' notice, and more if possible. Second, remind him occasionally afterwards, lest he forget or neglect. Third, decide upon the men to open the discussion as soon as the reader announces his subject. Sometimes he will wish to have a voice in naming them, which is perfectly fair. Notify them at once, and also subsequently, especially the day of the meeting. Discussers

will often dodge unless gently prodded. If a printed program is used, have it set up in plain, legible type, and copies mailed to members in advance. Postals may be used, serving both as a notice of meeting and the subjects to be presented.

The foregoing suggestions have touched upon numerous aspects of the scientific medical program; much more could be said, but each society will face such widely different conditions that details are best worked out independently. By far the most important factor in successful programs is to have them in charge of a man who is interested, and industrious. Tact is a valuable asset, but conscientiousness is better. Get a man who will do the work and be forehanded about it, and good papers will be forthcoming and an efficient system be developed.

Chairman: We will next call upon Dr. C. D. Morris, of Pontiac, "**Social Features of the County Program.**"

Dr. Morris: My first words this afternoon must of necessity be in the form of an apology. After accepting the invitation to appear before you I went on my vacation, which was an automobile trip to Boston. I did not get back quite on time, and of necessity did not prepare the paper with which I had expected to startle this society. In fact, I had written two pages and was writing it when my brother surprised me yesterday by visiting me, consequently what I wrote I will not read, as it is incomplete. But the question of Social Features is really so close to my heart that I felt as if I could speak better than I could write. The secretaries themselves do not have an opportunity, especially on their feet, consequently I am not quite as experienced in that as I hope some of the rest of you are.

Social features have figured largely in the success of our meetings in Oakland county, and I feel that if I simply tell our experiences it will be taken as the things that I believe in myself because, being the secretary, I have followed out my own ideas.

The meetings that we have held in Oakland county have been four each year, and the annual session consists of a meeting where social features reign supreme. The annual meeting is held in the early part of December, consisting almost entirely of a banquet, speeches or after-dinner remarks. We also have our election of officers, which does not take very long. Then at

the banquet we have some of our best representatives, councilors and men from out of town, who speak to us on the serious part of the program, while our local men furnish the humorous side. We have men who recite in dialect, and we have singing, calling on those who can sing, or think they can (and we have both); it really adds to the pleasure of the occasion to have somebody sing who is not as good as he thinks he is. At the last annual meeting we had with us Dr. Schenck and Dr. Dock and after that meeting Dr. Dock and myself were entertained at the Asylum. During this informal talk it came to my mind that a society song would be about the proper thing to stimulate the social success of such a meeting, and, in fact, at one of the District Councilor meetings Dr. Dock made me promise I would have something to say on that subject, but I was not able to be present. It seems to me, gentlemen, that these things add greatly to the success of a society. Technical papers are all right; they are enlightening, and they indicate the preference of the profession and strengthen our views and impress on our memories indelibly facts which we might not otherwise retain, but when we meet in social functions, we meet the member whom we perhaps felt was a monster cussed Indian (and knew so, because our patients told us so, and they told it so many times that we were almost inclined to believe it, even though we did not want to believe it) but at the social functions we shake hands with him and talk with him, and find out that he is sincere, and that he is trying to do the same as we are.

I believe the social feature is really an important part of the success of the county organization, and I would thoroughly recommend a banquet once a year, with songs and after-dinner remarks by all those who can make them, and have some outside talent like that I have mentioned come in and stimulate the society, and I am sure you will all be perfectly satisfied. As we have a long program, I believe I will not take up more of your time.

In opening the discussion, Dr. H. L. Bower, Montcalm, said: Mr. Chairman, I saw in the announcements that we are exhorted to "Remember this program is meant for *you*. Those reading the paper will only open up the subject. The value of the meeting will depend upon you relating your experiences and in giving your ideas and suggestions."

I think that Dr. Morris has pretty well opened up this question. I would not endeavor to improve upon the paper, that has just been given us, because I could not do that, but I think that I can say more, perhaps, of interest by simply relating experiences.

I have had quite a little experience along this line in the county society. Our county is large enough geographically, but we have only about 50 physicians, perhaps, all told, in the county. We have succeeded in getting 30 members this year, and that is the largest number of members we have ever had. I am very glad to note that our county is a little past the average, after all, as we have a larger percentage of membership than the state itself, which is somewhat gratifying. I was very much surprised that this was so. Now the social features of our county have busied us considerably. We have an annual banquet, and these banquets are about as social occasions as we could wish for. By the way, we meet all over the county; we have not any central point, although Greenville is more central than any other point, but we are away off to one side of the county, and hence a great many from other parts think that they should have the meetings occasionally. We went into one little town at one time, and to the surprise of every one who was there, the local physicians, three in number, bore every expense. They had a good banquet at 12 and when we came to pay our bills they said they were all paid. Then after the meeting was over we were invited to another feast at one of the physician's houses, which of course served as a very great entertainment to us all, and we all declared that we had a good time.

Last summer we decided that we would have a basket picnic at Greenville, inviting the profession, and their wives and their sweethearts and everybody connected with their families to come. A little after that I read in the State Journal that Ionia county had taken the same action. We did not know anything about it. They were to meet at some point near Belding, or at Belding, and be entertained by the Belding physicians at some lake near Belding. I said to myself, there is no lake near Belding, no resort lake except our own Baldwin Lake at Greenville, and the probability is that there is where they are going, and so after a conversation with Dr. Cope we arranged it that we should have a union meeting, and that the fraternity of Belding and of Greenville would

entertain all who should come. Now I think that Dr. Cope will agree with me that that was one of the most social features that we had had for a long time. It certainly brought the doctors together, got them acquainted, and served to enable them to have a good time, as well as the ladies who came with them. Now this resulted in a motion, which was unanimously carried, that this should be an annual feature of these two counties, so that I suppose hereafter it will be understood that there is to be a picnic at Baldwin Lake, near our town, and that all the doctors and their families are invited to be there. I know that the sociability of that picnic has given us to think that we are to receive new members at our next meeting. Our annual meeting comes the 8th of October, and two men who have stood out from our society for years declared that they were going to unite with the society. It was the social feature which did that, they enjoyed it so much.

I do not think that we can emphasize this feature of our work any too much, for we all like sociability and it always is an uplift. We go through the humdrum of life and we get tired of it sometimes, and an occasional picnic of that kind will enable us to throw off that dull feeling and be glad that we are doctors and glad that doctors are sociable beings and that they delight in social functions.

Dr. Samuel Osborn, Ingham: Mr. Chairman, it pleases me to bring greetings from the capitol of the state, and to tell you that we are going through some of the same trials that others are going through. Up to a year ago we had six meetings during the year of which two were social; one was a picnic at a lake somewhere, and another was the annual meeting, held in November, so that we had really four medical meetings during the year. Really, we could do little, having meetings so far apart as that. Outside of the medical society, there was another organization started. We called it the Physicians' Clinical Club. Of course the members who started it were members of the Ingham County Medical Society. At the time of the annual meeting the matter was talked over, and we are now all one, that is, there is an Ingham County Medical Society, but we call the organization which meets every week, the Physicians' Clinical Club, but it is all one society. We have had the question as to length of program. We decided that by saying this: We meet at

8:30; any one that wants to go is free to go at 9:30. Our meetings usually last longer than that, but some go, and they know that it is right to go at that time, if they want to.

Our programs have been arranged in advance. We have allowed a man to select his own subject if he wished to, and we also gave him permission to ask for an assistant and we made them responsible for that meeting—that is, the man and his assistant were responsible for the meeting, so that if the man who had charge of the program could not do it, his assistant could do it, or if he wanted some help in doing some microscopic work or other work alongside, or some part of the discussion, he turned that part over to him. We are anxious for the Clinical Club to start its meetings again. We had only a small attendance, probably 12 to 15—sometimes as high as 20—but it showed what people were interested in doing better work, and we expect to get more into the special work during this year. We only had 7 months last year in which we met every week. We expect to do as well as that, and probably better, this year.

Now, coming from Lansing something of course along the line of law-making appeals to me. As far as I am concerned, I am not so busy but that I can write a letter to my representative, or my senator, urging him to do something along the line of attending to some particular law that I think ought to be passed, and I believe that if more of us would attend to that, get in communication in some way so that we know that certain laws are up for discussion, or if we write to our representative that he will notice some things more than he has heretofore. That appeals to me. If we want to get a law to put the opticians out of business, it is our business to make it known to people who have law-making in charge.

We all enjoy our social meetings; there are only really two social meetings during the year; one is the annual meeting at which we elect officers, and at which we have a banquet; the other is the picnic which we usually have at the lake. Of course the doctors enjoy the bath that they get at that time.

I hope you will keep in mind the law-making part of it.

Chairman: As has been said, the value of this meeting depends upon the discussion. These two papers that we have just listened to are now open for general discussion. Let us speak briefly

about our successes and failures; try and limit the discussion to about five minutes.

Dr. C. T. Southworth, Monroe: Mr. President, I represent a county society of which we are very proud, the Monroe County Medical Society. Forty years ago the first Monroe County Medical Society was organized. At the first meeting we planned an organization and at the second meeting we adopted a fee bill, and at the third meeting we ended in a fight and died. Twenty-one years ago six of us got together and organized a second Monroe County Medical Society, using the record book, that was in my possession, from the organization of the first county society. We had a meeting of eight members, and organized. The following month we had another meeting, with an attendance of 12; the third month we had another meeting with an attendance of 14, and at the third meeting the question of the fee bill again arose. A fee bill was drawn up and adopted unanimously by all members present, signed by not only all the members present, but by all the physicians in the county. At the fourth meeting charges were preferred against three of the members for going back on the fee bill. The fifth meeting was a general fight, and the society died.

Ten years ago next month, the same six who organized the association 21 years ago organized another association still called the Monroe County Medical Society. We issued a call, and 17 physicians attended the meeting, in October. After a little discussion, one of the original six got up and made a motion that the first man who brought up the subject of fee bills in the Monroe County Medical Society would be expelled from the society; the consequence is that our society has spent 10 years of harmonious existence. We have four meetings a year; the average attendance is 11 or 12—eight from the city and the others from the county. We have 34 physicians in the county to draw from.

We have tried meetings in different parts of the county; we have met in every town and every village in the county, but we have been unable to increase the attendance from the outside, except at our mid-summer meeting in July, which we devote almost entirely to social matters, and then we have an attendance of 20 to 24. During the mid-summer meeting we aim to have two or three prominent physicians from Detroit or the surrounding country. We also draw on the prominent men in Toledo, as we are a southern county in the state, and from the southern

part of our county the physicians go to Toledo more than to Detroit. We have a meeting at 10 o'clock in the morning, a dinner at some summer resort at the lake at 1 o'clock, and after dinner the afternoon is spent in a ride on Lake Erie and in bathing and such things. Our October meeting, where we elect officers, is followed by a little supper given by the program committee. Our January meeting is usually held in the town of Newport, where we have one member who entertains us with a game dinner; so that there is only one meeting in the year when we don't eat, and that is the April meeting. The reason that we don't then is that the roads are so bad it is hard for any one to get in to that meeting, the members are generally busy and our attendance generally five or six. At our last April meeting I think there were three papers and one audience.

The program rules are—always three papers. We insist upon three papers at the meeting. Discussion is general. We have tried the arrangement of papers in alphabetical order, but we found that we failed. Our most successful method has been the appointment of a program committee, the committee consisting of three, and it being their duty to provide three papers for each meeting, even if they are obliged to read them themselves. For ten years now we have had a very pleasant and harmonious time. It has been a means of bringing in good men who were entirely ignored by physicians and looked down upon and had no place in the profession, and I am happy to say that we are all the best of friends and have been since the organization of the society—the only thing that ever would have brought us together.

Dr. J. C. Johnson, Lenawee: I think Dr. Bulson is having a little trouble with that 50 per cent of membership. Undoubtedly the secretary gets hold, in some way, of all the men in the medical calling who practice medicine in each county from county clerks, etc. If you would take the men who are legally qualified you would have a large number; if you take the men actually in practice, I think you have a large percentage, more than 50 per cent, as members of the state and county societies. I know in my own county one can get at least twenty men who do not care whether they see a patient from one year to another. Their names are still on the books as medical practitioners. I think the percentage is more than 50 per cent who are actually

practicing physicians, who are members of the society.

Dr. Oakman: I think, with regard to my paper, that there is nothing to add. I would simply repeat that it is interesting to hear the experiences that you have in different places. I repeat, that this whole matter depends upon circumstances in the individual county; they vary so much. We are all aiming to do the same thing, and whatever means will best accomplish that thing in any given county must be judged according to local conditions.

Dr. Morris: There is one thing I want to bring up for discussion some time during the meeting. Perhaps I will not take the floor again, so will mention it now.

Our society has been bothered about the question of contract practice. There is no paper covering that subject, I think, and perhaps it would be as well for me to approach the subject now.

We have asked at each meeting a committee to report on recommendations regarding contract practice. At the last meeting the secretary, with two or three other members, reported that they believed it was not a proper time to take stringent action or drastic measures regarding contract practice. As far as Pontiac is concerned, in our local society, we have framed a contract, or guaranty, or promise, that no physician would engage in contract practice, and at the expiration of their present contracts, which expire some time in December, it would be discontinued by them. We have always at least two or three men in town who are willing to do the contract practice. They get as high as \$1.50 a year from each member of certain lodges or fraternal societies, and some of them even have to furnish their medicine for that price. It brings them in all the way from \$800, \$1,200 or \$1,400 apiece, and if they have not a very lucrative practice, they dread terribly to give that income up, but they all agreed and signed this contract. At the same time we adopted a fee bill, and I think a fee bill is a very pernicious thing in a society. I have some sympathy for the Monroe society. Our men are living up to the fee bill, I think, as well as they can, but one of our men, who does contract practice, has reason to believe that the men are not living up to that, as he is living up to the fee bill, consequently he has said that he will

not live up to his signing the contract not to take contract practice, and it is up to the rest of the members to show to him whether they will live up to the fee bill. Anybody, I think, can find fault at the same time in some way with the fee bill. We cannot all charge always the prices that are listed on the fee bill; it is absolutely impossible, and it seems to me that it is for the state society, in some way, to get at the question of contract practice. There are men who live in the small towns where they have a fraternal society who are on very friendly terms with certain members, have always been their family physicians, and if they were to take a stand to not take contract practice they would lose a great deal of prestige of well-known and prominent people. These prominent people, at the same time, do not expect the physician to give him medical attendance just because he belongs to the fraternal society, in fact, they pay him the regular price, but for the physician to take a stand and try to tell their society what they will not do, and what the society should do, is something they do not like. It is an important thing in our town. We have six or eight fraternal societies with large memberships, and these societies have tried to throw their influence toward two physicians who favor them and against the physicians who do not favor them, and have said that if the physicians in town now were to live up to this contract they would import somebody who would do the contract practice. In fact, we have two new men in town whom we have not been able to induce to join our local society, and it is the general opinion that they are ready to take the contract practice if these other men throw it down. I hope before the meeting ends that some discussion will take place regarding the contract work in other counties. I would like to know what the other counties are doing.

Chairman: The next paper is "**The Business Side of the Secretary's Work.**" Dr. A. S. Kimball, Battle Creek.

Dr. Kimball: When I unfolded my letter from the committee on arrangements, assigning to me this topic, I wondered if they had lain awake trying to find a hard nut for me to crack.

In the discussion of such a topic as the "Business Side of the Secretary's Work," I think Dr. Oakman, Dr. Morris, Dr. Johnson and Dr. Cope will all agree with me that any side of the work is "business."

I infer, however, that I am to handle the money end of this proposition, and personally I think it is the "business side."

In the first place a secretary should keep his society's business independent of his other business affairs. That is, he should keep his society books independent of his own; keep them as conscientiously, and, perhaps, more so; and above all, keep his society's moneys absolutely independent of his own. This may seem an unnecessary warning, and probably to many it is, but I have known of instances where secretaries have carried society and personal accounts as one and so have not been able, save with a great deal of work, to give even an approximate idea of the condition of the treasury when they have been asked as to the amount on hand. This is not good business; one should at all times be able to tell at a glance his balance.

Besides maintaining a separate account for each member, a cash column is essential to good business, showing all collections and each expenditure.

The annual meetings of most of our county societies are held in December. As the dues for the coming year are payable in advance, each secretary should go to this annual meeting with each and every account posted to date and dues for the new year entered in the debit column, prepared to credit and also urge their payment for the new year. If one once gets the habit, your members will do likewise, and your troubles for the year will be greatly lessened.

And that brings us to that troublesome trouble of all our troubles, that veritable nightmare of a secretary's official existence, the collection of dues. One would think that the member of a medical society, and especially one of his own profession, would be anxious to keep himself in good standing. But physicians are human, and, like all the rest, they are careless. They are apt to have just paid the coal man or milk man; or "when are they due," or "I thought I paid those last fall," when, in reality, they paid for the year previous "last fall;" or "I'd forgotten it, call next week." But secretaries were once mere members and they must remember their own days of neglect and, while now they see the wisdom of early and prompt payment, they must bear in mind that there were days when the secretary's request seemed very inopportune. So cultivate patience and diplomacy, be always hopeful and optimistic, and perhaps some day you will be successful. Persistency and tact are

the two qualities absolutely essential if one is to collect the dues of a year before that year ends.

It is as tiresome to hammer a physician for his dues as it is patient for the payment of services long since rendered, but when you do finally get that money in your possession you should at once place it in the bank chosen as the proper repository for your society funds. And right here let me add a word of warning, never draw one cent of it out save by check, so that your returned vouchers will check up your final account.

It is in this matter of dues that we come very materially in contact with the state secretary, for by the Constitution of the State Society a member in good standing in his state society must first maintain good standing in his county society. So, if his county secretary fails to report him in good standing, he will probably be placed under the ban by the state secretary. Again, while we, as county secretaries, are having our troubles in keeping our local members in line, our state secretary is having his, and they are manifold, in keeping not only fifty-five county secretaries straight, but also keeping his eye on the entire multitude of state members so as not to put in bad standing any who should remain in good repute. In order to do justice to all, therefore, it behooves the county secretary, immediately upon the receipt of a member's dues to remit them.

This constitutes system; and, with its close application, many of the petty embarrassments and unpleasant features of our work as bookkeepers and collectors disappear. We are the middle men, the buffers alike for state secretary and member, and prompt, businesslike dealings with both will make our own position far more pleasant and bring in return help and appreciation from all.

Another feature of our work is the contracting of bills and their payment. The expenses of a society's maintenance are very variable. Many expenses are of more or less fixed sums, while many vary with the tastes of the society. A small, scattered membership finds it hard to keep debts out of the way without the necessity of large local dues or special assessment. If, as is the case with Calhoun, a society is incorporated it may require many funds to carry on its chosen work. To meet this is sometimes becomes necessary for the members to make sacrifices which, in the instance of Calhoun, was in the shape of foregoing the pleasure of the annual

complimentary banquet and sitting down to one provided at the expense of such members as cared to partake. In order, then, not to work unfairness or inflict unnecessary expense, the greatest care must sometimes be exercised. To grant one individual concern your printing because it happens to be friendly to you, when another around the corner will do equally good work for a dollar or fraction less, is not always good business. In your own business you know that a few cents multiplied several times often makes a big difference in the family exchequer. Then why not practice the same economy in your business dealings for an organization which is composed of fellow practitioners in the same boat with yourself and who have elected you to a position of trust because they considered you worthy of the trust?

Ordinarily the secretary must provide the place of meeting. One's tastes vary. It is possible to pay five dollars for a meeting place or by the application of a little effort on your part, provide one equally good for nothing or at least at actual cost. It is these little differences that help your surplus in your final account.

Finally, we come to the annual meeting where we are to account for all our business dealings of the year. You must go to that meeting with a statement, setting forth clearly the exact condition of the treasury; showing all collections, from whatever source; remittances for dues to the state secretary; all minor expenditures, and show clearly your balance, or if you are so unfortunate, your shortage. Have your ledger properly balanced to date. Show every voucher returned for every cent expended, and have your orders properly drawn and receipted.

Having all this done before the annual meeting will prove your business capability and also lessen the laborious task of auditing imposed upon your board of directors, as well as having everything shipshape for your successor.

We, as secretaries, must then, first of all, inaugurate system into our whole work; promptness both in our dealings with the state society and local members; maintain or, if necessary, cultivate patience, persistency and diplomacy in our dealings with our fellow members, and practice the strictest of economy in our dealings with others for the good of our bank account; and finally account in a clear and concise way for our year's work at the annual meeting.

These are a few of the many and various expressions of the "Business Side of a Secretary's

Work." There are many more, and I hope that many will be brought out at this meeting.

Chairman: Dr. L. L. Cahill, of Mendon, will open the discussion. Dr. Cahill does not appear to be present; this paper is now open for general discussion. Let us not waste any time.

Dr. Cope, Ionia: Mr. President, I would like to say something along the line of the business side. I am going to open up an avenue that we have not been accustomed to looking down, and still at the same time there may be in the perspective something worth looking at.

Sometimes medical societies are short of money. Sometimes it is a burden for the physicians to contribute. What would you say in your society to having a paid lecture on some scientific subject; let your county society distribute these tickets throughout the county and bring before the people in your county something that would be uplifting and elevating. There has come to my notice this, that I think is worthy of attention:

"Some Problems of Modern City Growth," Illustrated.

BY V. P. RANDALL.

SYNOPSIS.

City Evolution.
The Housing Problem.
From Mansion to Tenement.
Shacks and Alley Houses.
The Immigrant.
The Ghetto.
The Factory District.
Industrial Betterment.
Bill Boards and Beauty Spots.
Disfiguring a City.
Parks and Playgrounds.
Public Baths and Fountains.
Social Settlements.
Work With Boys.
The Fraternal Church.
Tuberculosis.
The "Lung Block," New York.
Public Health and Its Economic Value.

"A lecture of great interest and value, not only to those who live in larger cities, but to those who live in smaller towns, as the matters considered are common to all growing communities."

This lecture is by Mr. Randall, who is one of the men who had to do with the destruction of the celebrated Mulberry Bend, of New York City. He has been twice around the world; has lectured at Ann Arbor, and I met him and told him that I would present this subject to you. I will give him the address of every member of this society and he will tell you what he has and you can take it up. Perhaps you may want to have this in your community, and from this you can get some money to help bear any extra expenses that you feel that you cannot otherwise bear.

Dr. Bower, Montcalm: This question of dues from delinquent members is a very important one. A member of our society came into our town a little while ago, and on meeting me he said: "I have paid my dues for this year." Now, the matter of fact was, he had not. We talked a little while, and he said he would look it over when he got home again and see if he was mistaken. I have not seen him since, but I apprehend that he will come to the annual meeting, and will fail to bring the \$6.00. I have wondered how these things would work out, and whether according to the postal law the secretary would be at liberty to send a delinquent member his monthly journal. If this is so, this might obviate the difficulty, and a member who failed to receive the monthly journal might know that his dues had not been paid, and he was therefore not in good standing financially.

Dr. Burr, Councilor, 6th District: I am reminded of a plan in Flint of the Civic Improvement League, which was introduced in its constitution for the collection of dues. If they were past due for a month or so (I do not know how long), the member should be drawn on through the ordinary commercial channels, making sight draft through the local bank. I apprehend if that were put in force in the county societies the members might slowly be led up to the consideration and adoption of it. It would work out well in some localities at least. One does not resist the importunities of a bank collector as a rule. It might embarrass some secretaries, and might offend some members; I have an idea, though, it might possibly be available as an expedient.

Dr. Bulson, Councilor, 2nd District: It seems to me that it would be better to have a resolution

pass the Council to that effect, and notifying the member in advance that that will be done, because I know that many men will take exception to that. If there is official action taken by the Council it opens the way for the draft being sent, and the official action it seems to me is a good plan.

Dr. Burr: I thought the county secretaries could do it for themselves. They do it, and then they cannot go back on their own action.

Dr. Bulson: I want to say to you, gentlemen, that this is the important factor in maintaining this organization. There is no question about it. There is one county in my district, good men, and there are three-quarters of them delinquent, and I cannot understand it. The secretary is the important one to push the collections. Of course we cannot afford to send the Journal to delinquent members; it is not right to you, and those who pay their dues, but if there is some way to get at it by sending a draft, I believe it is the thing to do, and I believe it would be a good thing to have a resolution passed of that kind. I think every society would take action, and if necessary the Council can fortify it.

Dr. McCormick, Shiawassee: If a man is back two or three years in his dues, and wants to rejoin the society, is he taken in just for the year's dues, or must he pay his past dues? I think that will occur in almost any society; if a man is back, say \$12, is he required to pay that amount, or will you take him for the \$3?

I agree with Dr. Bulson that the strength of the organization in various counties depends largely on keeping up your finances, because where a man's treasures are, there will his heart be also, and if they get behind in their dues, my experience has been that they will cease coming to the meetings.

Dr. Haughey, Councilor, 3rd District: At the time of the reorganization, Calhoun county Medical Society was in line and took Charter No. 1. We were ready for organization. When I commenced as secretary, it was right on top of a motion to disband, because there was nobody present; we could not collect dues, nothing could be done. I believe that if I had drawn on these parties for dues in advance, or used any other means excepting my own persuasive way of getting it, we never could have organized that county again in the world. When we quit at the end of

nine years of my service the dues were pretty well collected up. Now I did not try to collect these dues at the meetings. I collected at the meetings as much as I could. I never failed to mention the matter to a man who was in arrears whenever I met him, and never found one who took it in any other way than thankful to me for doing it. I believe that if the secretary will follow that plan—whenever he meets a member in arrears, quietly and gently tell him of it and suggest to him that he should pay—you can collect these dues at any time. Now there may be times and places where it is well to draw on them, but I think not for one year's dues, but that they should be more than that behind before doing so. In our county, however, we have now a different by-law. Our county has incorporated, and the by-law makes it a civil obligation that a man pay his dues, and if he does not pay them we can collect them, draw on him or collect them in any other way, as long as he remains in the county. I feel that the whole secret of the situation rests with the secretary; he must be never ceasing in his labors. He must remember at all times that he is secretary of that society, and whenever he meets a person, a member, who is in arrears, make it known to that person that he is in arrears, that the dues must be paid. You can do it, boys. I did it nine years, and that is quite a little while, and we had a membership of nearly seventy.

Dr. Inch, Kalamazoo Academy: I would like to ask if it is customary for the county societies, if a man goes in after the first six months, to charge the full rate for the year, and if the state medical society allows them any "cut rate," going in late. It has been the custom with the Kalamazoo County Society, if a man comes in two months before the end of the year, to charge him the full rate for the year. It does not seem to me to be quite right.

In regard to collecting dues; in our county society I have usually adopted the method of sending out bills every two or three months. Then if they do not pay before the end of the year, I go around and call on the members. I think we are usually able to collect all the dues; I think only seven or eight members are behind now in the society. Our by-laws would not allow a man to come in only for two months, without paying dues for the year, \$4 or \$5. I hardly know about collecting the state dues, whether they expect the full amount for the year or not.

Dr. Burr: This is an important matter and, if I may be pardoned, just one word. This society is here to lighten, if it can, the secretary's burden. God knows, he already is a terrifically overworked man. I have myself been the secretary of a society and know whereof I speak, and I don't think it is his business, in the natural order of things, to dun, and dun, and dun; to petition, and tease, and tease, beg and implore the men to do their ordinary duty to a society in which they are just as much interested as he himself is. I say, then, let us find a means for lightening his load rather than increasing it. Furthermore, a man who meets me every few minutes and asks me how much I owe him, if I were in a position so that a man would have that to say to me, would be more or less pestiferous; I would much prefer to hear from him in the manner of which I spoke, and certainly there can be no objection to that method of collection. It would succeed, in a large majority of cases, I fancy, if the society itself instructs its secretary to draw upon its members in that way. They make the law for themselves, and they can be bound by it. There can be no occasion for sentiment or feeling; it is just a matter of business, pure and simple. That is all that I have to say. I speak of this matter now, because, thinking it over, it seems more important to me than when I first got on my feet. It seems to me that it would decrease the burdens rather than impose further burdens upon the secretaries.

Dr. Hirschman, Councilor of 1st District: I do not want to anticipate; I just want to let one thought sink in now, at the present time, which will be elaborated later and which I think will greatly simplify the business. Since the Wayne County Society took up the question of legal defense and made a provision in its constitution that no man was entitled to defense if he had been in arrears for dues subsequently, it has been the best collection agency we ever had. If the state society should take up this matter, and make the same proviso for any man in arrears, that either in the state or county society he is not eligible for medical defense, it will be found to be the best possible collection agency.

Dr. Garvin, Tuscola: I am not secretary of our society, but through his courtesy I am here today; I was, however, secretary for three years. I believe we have, in Tuscola County, a means that

helps to collect the dues, and there is certainly never any deficiency as long as this can be carried into operation by the treasurer, and it answers some questions on one phase of contract practice, and that is, contract practice for the county poor. In rural districts it has been a bugbear to the physicians so many times as regards the care of the indigent of the county. The physicians certainly do enough charity work, and when they have continued sickness it becomes necessary in some districts to almost beg the supervisor that some way be provided for his fees in the matter. In our county for a long while it fixed a schedule of fees for all the physicians; the supervisors themselves fixing a cut rate fee for the physicians. In trying to fight that cut-rate fee we sought to establish a ruling with the supervisor that the physician should get the same amount for attending an indigent case as for an attendance in regular practice. However, they found sufficient physicians throughout the county who cared to take care of the indigent in their district for a certain fixed rate—all indigents were to go to them. They succeeded very well for a year, with the result that the physicians who did not have a contract with the supervisors, did as much indigent work as they ever did, because they would not turn away the family, and the other fellow got the pay for it.

For a year now there has been in operation in Tuscola County, a plan like this. The supervisors pay into the county society a sum equal to one-third of the total they paid for the three previous years, something like \$4,000. Every member of the Tuscola County Society was to attend to all the calls upon him, unless it was a case where he thought the patient was a dead beat, when he could require that he get an order from the supervisor for his attendance. It has worked very nicely as far as the services rendered to the people are concerned, and it has worked better still for the physicians, because they turn this into one general fund, and have taken 80% of the sum and divided it among the physicians equally, who get so much for belonging to the society. They reserve 20% to meet the extra expense, and to meet the expenses of the meetings. While they charge the same dues, \$3 per year for each member, they keep in the treasury 20% of what is paid in from the county for the purpose of entertainment and meeting the other extra expenses of the society. As a result of this, I think that perhaps—I am not sure—Tus-

cola County has the largest membership for the number of physicians of any society in the state. They are all anxious to join, and to stay in. We have a nice little bank account on hand, and the physicians, at the end of the year, will have received in the neighborhood of \$80 each, and each does all the work that comes to him. He does the work, and tries to collect wherever he can. It makes it a great deal easier to get along with the supervisors, relieves the bone of contention between physicians and supervisors, and has made almost unanimously harmonious action among the physicians. One of the questions that have been brought up this afternoon, of the collection of dues, whether we should collect for the year only or the whole amount in arrears; that is the only thing that has come up to mar the working of the society. One member had been in arrears for some time, a member whose reputation as a physician was not the best at least. He went to the secretary and paid up all his back dues, after this scheme had been in vogue six or eight months, and then wanted his share of the divy that had been made. This is yet unsettled. It is still before the society for adjustment.

It would seem to me that in the rural districts especially, where they do not have hospitals or hospital facilities, or the county-poor physicians, or city-poor physicians, that a plan like this could be worked out and would bring into the membership of the state and county society at least every desirable physician in the county. It certainly can work no harm to any one. The county patient does not feel obliged to call upon one individual member, because he is the county physician. He can make his own selection of the physician, and it certainly is working out very harmoniously. A year is nearly up, and we are anxious, in Tuscola County, to continue the work for another year. That also has a good effect upon its membership.

Concerning the fees for life insurance examinations and for some of these other things it also has a good influence; they feel that if they do not live up to the rules of the society in regard to those things, that they stand a chance of losing their membership, which means something to them. The system, perhaps, is not exactly perfect; there are some members who get paid for work that they have not done during the year; others who have done work over and above the amount that they receive, but I think that, one year with another, we will average up, and we believe it a good plan in Tuscola County.

Under that plan I think the interest in the scientific part of the meeting has improved, and we have gone from four meetings to six meetings a year—or from once in three months to once in two months.

Dr. Perkins, Bay: Up to this year, the Bay County dues have been \$3, but beginning with this year, in order to give us more money, we have increased the dues to those members in the county to \$5 and those members from outside the county, either in Arenac or Iosco, who have to come to the meetings from outside, still pay \$3. For lightening the duties of the secretary, in Bay County the dues are collected by the treasurer. He is also councilor of the district. I think it is quite successful, and we will have no more trouble in collecting the \$5 fee than we did the \$3 fee.

In regard to this plan of taking care of the indigent poor. I am glad to hear this report from Tuscola County, because just now in Bay County we are about to draw up a contract whereby the members of the county society will take care of the indigent poor in the same way as has been stated. At present the county has contracts with a number of physicians, four or five, who do the work in their districts for a certain sum. Our plan is to draw up a contract with the supervisors whereby the poor shall signify what physician they wish to attend them. They are to get an order from the supervisor and bring that to the physician, or else signify to that supervisor what physician they want to call, and have him call the physician. Just what amount will be fixed we have not yet decided, but those men, members of the society who have had this contract previous to this have signified their entire willingness to relinquish it to the society. The money that we receive, or that we expect to receive for the first year from these services, goes entirely into the treasury of the society, and if the plan works out as we hope it will, for the coming years, the money will be divided proportionately among the members of the society.

Chairman: I will call upon Dr. Kimball to close the discussion.

Dr. Kimball: I am very glad to hear Dr. Cope's suggestion in regard to the lecture. In line with that I might say that the plan which was suggested at Manistee in order to defray the expenses of the state meeting this year is also, we hope, going to be worked out, helping

Calhoun to pay part of its expenses, and perhaps lessen the size of the dues for the year. By the reporting of contagious diseases to the Board of Health we collect 10c for each report, which we are endeavoring to collect for the members as a part of the county society fund. If we do that it will lessen our expenses greatly. The same plan can be adopted in any other county, because under the state law they are all entitled to get this 10c for each report.

Dr. Hirschman: How far back does that go?

Dr. Kimball: This year anyway. Another thing: Dr. Burr's question in regard to their not receiving the Journal, ought to bring some pressure to bear upon them, but it is surprising the number of men who are in delinquency who say they don't care two cents about the Journal and don't care to read it. Calhoun has a rather big proposition. Battle Creek Sanitarium located in Battle Creek comprises very nearly one-third the membership of the Calhoun County Medical Society. A number of the members who come in from Battle Creek are necessarily transient, so that while last year we had a membership of 81, at present we have a paid membership of 69 with the prospects of being able to collect from 10 more. The discrepancy is not entirely in the non-payment of dues, but includes those who have since moved away, and who have unfortunately had to be placed upon our honorary roll, but we expect to collect from those ten. Last year, as I said, we had 81 members, and there was but one member in arrears included in the 81. He is still in arrears, I am sorry to say, but he promised faithfully that the dues would be paid before the first of December, and I think sooner; so that by personally meeting with the majority of those men we are able, without any friction whatever, to collect their dues, although it is not a pleasant proposition. However, Calhoun has been fortunate in the secretaries it has had, and they have been all interested in maintaining the membership of the society and keeping it at a high level, and the majority of them have not been afraid and have not shirked their duty in collecting the dues.

Dr. Burr's suggestion in regard to sight draft I think is practicable, provided the men who are delinquent will attend the meeting at which action is taken and agree that the sight draft be drawn upon them, but unfortunately those who are delinquents are liable to be absent from the meet-

ing. In Calhoun we were incorporated in 1906, and by our laws, each man, when he signs our constitution and accepts a certificate of membership in the society, becomes civilly liable for dues, as long as he holds his certificate. Upon the surrender of the certificate his membership ceases, but he is liable until he surrenders it. It can be collected through the courts, if necessary. I remember one instance last winter; I had written at least three letters to a certain member of several years who came in and allowed his membership to lapse through non-payment of dues, and then in 1906 rejoined. Last year his dues were not forthcoming. I wrote him at least three letters, and heard nothing. At last I wrote him and enclosed a 2c stamp for reply, hoping it might jog his memory. I got a letter right away. He returned mine, penciled at the top, saying he hoped I would rest easy. He enclosed the dues, so I rested easy. I met him at the next quarterly meeting and asked him if he would not like to leave his dues for the next year, and he said: "Doctor, I believe I will; it will save postage and correspondence."

It has been asked with regard to the method of reinstating delinquents. The policy adopted in Calhoun since the incorporation was that if a man who had been in good standing from an ethical and moral standpoint, had allowed his dues to lapse and wished to reinstate himself by the payment of dues, he was allowed to do so; however, he was given the privilege of applying for membership as an entirely new member, and filing his application for membership with the fee, as a new member. It has resulted in ridding us of some unwelcome members; because they once chose the route of coming as new members, so optimistic that they knew they could pass as they once had, and the fact that they owed us \$12 to \$18, as it happened, would be of no consequence to us and would be of some to them, and so they sent in their applications. They are not members now.

Dr. Inch's question in regard to the rate for membership properly belongs to Dr. Schenck; however, I have made it a practice in my remittance to Dr. Schenck in sending in new members, to send the rate in proportion to the time at which they apply, and I think a resolution was passed at the Saginaw meeting that any one applying for membership should pay only for the privilege of that portion of the year whose privileges he enjoys, which apply both to state and

county. If I am in error, I hope Dr. Schenck will tell me so.

Dr. Hirschman seems to have sprung the best plan on us of any, making a man ineligible for the defense as maintained by his county society. I do not think there are any but would keep in good standing if they knew the lapse of their dues would compel them to fight their own battles. The Tuscola County proposition came up before the Calhoun County Society for consideration, but on account of the peculiar situation of the sanitarium resulted in its being tabled indefinitely.

(Regarding points concerning dues to state society, see page 580.)

Chairman: The suggestion has been made that we adjourn for ten minutes. If there is no objection, we will take a recess until five o'clock.

Chairman: Gentlemen, we will come to order again, and listen to the next paper, "**New Members and Attendance**," by Dr. J. C. Johnson, Lenawee.

Dr. Johnson: Mr. President and Members of the Society—I see we are a little short of time, and I will give you only a few words.

The subject assigned to me is "New Members and Attendance." My idea of getting new members is to see the doctors personally, if you possibly can. Go right down to a man and talk to him. Tell him what you can do for him, and ask him what he can do for you. I usually try to point out to a man what has been done in the state in the matter of legislation; what has been done in other states. By that means, get your man in line, while he is looking for some benefit to himself. If you can get him interested in that, you have a little hold on him; then you can talk to him of what can be done in your county. There are few counties but have more or less quacks; it is necessary to take care of these people to a certain extent, and by going to an organization you can get some action on that man, and it is the only way you can do it. Also speak of the matter of financial benefit to him; the rate bill has come up; the matter of having a set fixed rate is a pretty hard matter to maintain. I will admit this, because we have been up against it and tried it out; but you can show a man this much, that he is a good practitioner, and ought to be a member of the society, which is one way of showing the people that he is trying to busy himself and give them the best service. Hence he can command more money for his services. A cheap man is never of much use in any place.

Now, then, another financial benefit to the man is this, the matter of a good fellowship between the different doctors. Time and time again you get stuck where you do an operation in your own town, or your own village, where, if you are not on good terms, you cannot get a consultation, and the patient is sent away to a large city. You lose the work, and possibly have for all time to come.

We aim to publish our meetings to the public, letting them know that we are the honest physicians, that we are doing the very best we can, and let them understand that the man who does not belong to the society gets into a rut and is not a good physician to employ. The better element of the people are taking to that idea, and it is bringing pretty nearly every man that we have in the county into the society.

To get the new members we try to show them what can be done in organization. We sent out some letters. I will read one that I sent out to those who are not members:

Dear Doctor: This is an age of organization. Great achievements today are made only through united effort and organized push. For centuries the profession of medicine has remained passive—(until civilization and human progress were rapidly gathering momentum); content with its scientific researches and its quiet and kindly ministering to human ills. It is only within the last few years that our profession has sought by an union of its forces to become a power that shall be felt in the betterment, the upbuilding and the breeding of the human race. Already we are being recognized as a factor in national progress and the day is not far distant when we shall see the establishment of a bureau of public health at the head of which shall be a physician who is a cabinet officer, who will sit in the counsels of our nation. This recognition will be gained through the influence of our national, state and county societies. We desire to strengthen our position all along the line. We want you to join us. We need your help and you need the good cheer and benefits that we can bring you. By becoming a member of the Lenawee County Medical Society you also become a member of the state society, and will receive the Journal of that society monthly which, in itself, is worth the amount of your dues. We hold our meetings monthly, and we enclose a year's program which as you see embraces many good papers and discussions by Lenawee physicians. A course in post-graduate work, clinical cases and reports, and besides we

have the promise of papers and talks from many very able men from outside the county. Last, but not least, you will become acquainted with your professional brothers. Learn to know and value the friendship of many a man loyal and true who is fighting life's battle and enduring the hardships of the long night rides with a courage and fortitude equal to your own, who is with you shoulder to shoulder, keeping step to the music of duty's daily call. Come with us. Help us to make our organization strong and complete, and let us help you in the many good things we have in store intellectually and physically and socially.

Trusting that we may see you at our next meeting prepared to join with us in the work of the coming year, we are,

Faternally yours,

O. N. RICE, President.

I. G. NORTH, Vice President.

J. C. JOHNSON, Secretary.

We sent that to every registered physician in the county; we also sent him a copy of our year's program, which was made out for the year. That did bring us a good many new members, and by that means we have got our membership larger today than ever before in the county. Now when you have your membership, the question is to get the attendance. How are you going to get them out? My first theory is not to have meetings once in three or four or six months, at the call of the president, but I mean to have a set time for your meetings. In our own county we have them the second Tuesday of every month, and we find that by having them that way, we change the places and so on, but by having a regular time, the members can make their appointments, so that they can get to the meetings. We go to the different towns throughout the county. My city has about 12,000 and we have 27 physicians there. We have 75 physicians in the county, probably, doing regular practice. We make it a habit of going to each town practically every other time, if the railroad is convenient so that we can get to it; that means that we go to different places and get an enthusiasm started in each town, and thus are getting the members in good shape; then we try to arrange the meetings so that every member can be present. In arranging the work, we try to arrange so that every man has something to do. I always believe that you can get a man's interest, if you can make him work. To do that we simply strike off a circular, for each month; we publish that

on the first of the year. Each man's name is on there; it states when he comes in and what is the line of work he is to take up. We try and arrange so that the man has a subject that is perfectly congenial to him; if he happens to be a specialist, we try to arrange to have that kind of a paper. If it is a clinic, it is his duty to produce either the patient or give the history complete of a good clinical case. We very seldom fail to have it. I have had very little trouble this year in getting papers. Last year we had to go out and get this one and that one to give a paper. Now if you have good papers, you will have good attendance; if you have a dead meeting, you do not get the attendance a second time.

We usually take the trouble to get some man from outside of our own county occasionally.

As another method of getting the membership out, particularly in a place situated as we are, with quite a number located in a medium sized city, I want to suggest this: Don't put the member from the four corners of the county in the ice chest and think he doesn't know anything. Make him welcome, and sometimes he will tell you a whole lot that you in the city do not know. He has to do everything; has to be a specialist in every line, and has to use his gray matter and learn a lot of things which the city man doesn't know. Make that man welcome and you get him to come. It is only by getting good fellowship among the men that you get them to come.

We also try to encourage good clinical cases. There is nothing that gets the doctors to discussing more earnestly than a good clinical case. One case brings up another; it very often helps a man. We have a good many members who bring up descriptions of cases in which they were puzzled; they have gone away and said they were well pleased with the information they got. They come back the next time very much pleased that they were at the meeting before. By that it means that we have simply kept our members encouraged and are getting out our membership.

The local city in which we meet entertains all the members who come from outside the city; we put up a good banquet and we entertain them all. When they come in, they are just as free in our city and feel just as welcome as the men in our own city. At our annual meeting we always have a good attendance, and we don't forget the doctors' wives. When we have our banquet the doctors' wives are there, and they take a kindly interest in it. This has done much to stimulate general good feeling. We have not a bit of bick-

ering in any of our profession in Lenawee County; except possibly in the case of one or two who are not regular practitioners, we have very little trouble. I want to say to you that these social features have done much towards bringing this about.

Chairman: The discussion will be opened by Dr. A. C. MacKinnon, of the O. M., C. O., R. O. Society.

Dr. MacKinnon: A suggestion is all that I have to offer. I can say of my society that I am sure that there are not more than three members who have ever read our constitution. The former secretary, myself, the present secretary for the past year, and the president, thought it a good plan that we should have our constitution printed so that we might hand it around to the membership. Since December the O. M., C. O., R. O. Medical Society has increased in membership from 15 to 23, and it has been due, I think, largely to the fact, as the doctor suggested in his paper, of personal solicitation. I think that nearly every one of the new members are men whom I have approached myself and spoken to on the benefits of the organized profession.

When Dr. Bulson spoke of a United Profession it filled me with a glow of warmth such as I have felt at different times during the meetings and met there men whom I have followed on the field of battle.

In our society we have a banquet at each meeting, and as we meet in a different town each time, there is a variety in the entertainment which has done much to promote good fellowship.

Dr. R. Grace Hendrick, Jackson: I think I am safe in saying that the most interesting feature in the Jackson County Medical Society for the past two years has been the post-graduate course and it has been the most effective in getting new members. It is difficult now to get them out to the afternoon quarterly meetings, and we see no way of changing it to an evening session, because of the out of town members. This is our bugbear, to get the out of town members to join. We have dropped our dues now to \$4 for out of town members, and \$5 for regular members. We hope to have them back to attend the post-graduate course.

Dr. Burnell, Genesee: It would be interesting to me if more of the secretaries reported whether

they are trying to carry on the post-graduate work. Only one has mentioned it. We in Genesee County have carried it on for three years. We have 75 active physicians, 55 of whom are members of our county society. In quarterly meetings we have an average attendance of 30; in post-graduate work an average attendance of 17. The meetings have brought the physicians into better feeling one with another. We have had many pleasant meetings in a social way and have received much benefit. I would be pleased to hear what other counties are doing in this matter.

Dr. Johnson: I might mention one little point to show you where the good fellowship comes in I am a little bit of a "scraper." I had an argument with the Board of Health. They said they would not pay anything for health officer's work. I said they would. They sent me two notices to qualify as health officer, without any salary. They have not got my signature yet. They employed somebody else. I simply laid the matter before the doctors of the city, and every last one of them came right up and signed a paper saying they would not touch it, and I have got up a fee bill and submitted it to the Board of Health, and said, you will pay that or we will not do any work.

Chairman: The next paper is by Dr. C. S. Cope, of Ionia, "**What Can be Accomplished by Hustling.**"

Dr. Cope: Mr. Chairman, Fellow Secretaries and Gentlemen—Our meeting is unique, the first to my knowledge when secretaries of County Medical Societies convened to consider the good of each society in particular and that of the State Society as subsidiary to this. The caption, "What can be done by hustling?" has a twentieth century street verbiage stamp, and those who suggested it were for the moment forgetful that the medical profession has no prerogative for hustling in the ordinary acceptance of the term. The medical man is supposed to be well balanced, well qualified, and always prepared for anything that comes within the lines of his work. That the records of the Ionia County Medical Society may be cause for the remark that "We have hustled some" may have been the incentive for the caption given me. What Ionia County has to show today is not a mushroom growth, nor is it the work of a few months. For over twenty years I have been working to this end, namely, the medical unification of Ionia County practitioners and

methods. That the time has been long the years attest; that it has been a difficult task only those who assisted me in this work can tell. Conditions were peculiar when I first opened an office in Ionia and began talking about medical societies, a quarter of a century ago. There was no physician to extend the glad hand. To me was given a cool reception. For years my best endeavors were either discredited or "damned with faint praise." The schools were at swords points, and so were the regulars to each other. By living a consistent life, by conforming to the Golden Rule (the finest of all codes) I at first compelled respect and later acquaintance, and slowly, very slowly, grew in favor with men, especially with those of the household of Aesculapius. Always maintaining the medical society spirit, and early acquiring the medical society habit, (which is not a bad habit, but one that will take a doctor to every meeting), I did all that I could to foster this idea. There was at that time talk of resuscitating an organization known as the Union Medical Society of Northern Michigan. This was done, Ionia County being the most southern of the district that reached almost to the upper lakes. The attendance from my county was never large; for many years I was the only representative from my town and often the only one from the county. Our meetings were held quarterly, and, often but two or three, and sometimes only seven or eight doctors from the entire district would come to the meeting. It was then that some one whose faith would lessen and whose zeal would cool would move to disband. At such junctures I spoke for the continuance of the society, setting forth the plea that I was sure there were physicians who were confident of being present but had been unavoidably detained, and thus we clung together, and when the Union Medical Society of Northern Michigan finally died full of years and hoary with good works, it was only to arise again in the newer, better life of the county societies. Right here let me express my appreciation and admiration of the faithful few, the little coterie of devoted men who stood with and assisted me in this work; without their co-operation the effort would have failed. These furnished the nucleus about which has grown many flourishing societies. The good works of their past is the promise of the future.

When Doctor Leartus Connor came to us in 1902 with the county society plan, he found a well tilled soil in which to plant his ideas of county and state co-operation. By this time the

medical society idea had been talked about and worked up so that we started out with a good representation. Some who were with us at the beginning have passed from sight, "the destroyer of delights" having determined their destiny, and we mourn their loss. Some, a few, have temporarily fallen by the wayside. Many new names appear on the roster until at present we number every physician in the city and nearly every reputable physician in the county.

Now as to details. The first year was very successful. A reaction began in the second year and was quite pronounced during the third, due to the swinging backward of the pendulum, which is always noticeable in any new movement after the first flush of success. In 1905 I was asked to take the secretaryship, and this has been placed on me each returning year since, although I have sought to be relieved of this labor. Now you wish to know how I went to work to reanimate a dead society or one dormant from lack of proper exercise. In the first place letters were sent to every doctor not reachable by personal visitation; no long epistles; just a few lines calling attention to a coming meeting and inviting attendance and co-operation. These were repeated from time to time, as occasion demanded. Next, I always had prepared a tasty, inviting program and invitation, never twice alike. I consulted the printer and got him interested by telling him that I knew that he was an expert in the "art preservative" and that a program was desired that would be creditable showing of his handiwork, and one any doctor would be pleased to receive. I have with me several of those we have used and which are presented for your inspection. The idea of sameness and imitation is not always the best. Did you ever notice how our State Journal copies in form and feature the Journal of the A. M. A. Looks as much like it as does the little boy whose coat and trousers are cut just like his father's. Funny, isn't it, when you come to think of it? This may be all right but savors of "same old thing" and "dry as dust." I think that the reason that Abbott's paper, the American Journal of Clinical Medicine, has won its way so closely to the hearts of the doctors is that it does not sleep under the same covers summer and winter—"Verbum sat sapienti." You will notice that we carry on the front page of our program a substantial Ionic column. Our cognomen is of Greek origin, the county having been named for those classic lands of Asia Minor indented by the eastern border of the Ionia seas. You

will notice that the lettering about the column is of the modern Greek alphabet. In this column is typified at once our origin, our staying qualities and our aspirations. In the preparation of our programs we aim to make a change each time in paper, type, arrangement, verbiage, etc. These are little things, but all help to attract and hold attention and at the same time to stamp us as of the patrician order. In our meetings we avoid stilted parliamentary sittings. A call to order, official reports, short discussions and immediate attention to business. The reading of papers and presentation of clinics with bright, crisp, brief discussion; no time is allowed to drag. When the work is over there is a general good time in visiting. One good paper, well discussed and followed by an hour or more in social intercourse, is worth many long drawn out efforts that are not worth while. One capital idea Doctor Connor left with us and that was the strong presentation of the social side of the medical society, emphasized by banquets. Ionia being the medical center of nearly the entire county, the doctors decided to make this the permanent place of meeting with occasional meetings at other points. The Ionia physicians said, "Send out your invitations and programs to every doctor in the county; tell them to come here and we will furnish the entertainment" for they said: "It is cheaper for us to entertain them than it is for us to leave our business and go to some other place even if we do get entertainment," which they often did when the boys at Belding and Portland were our hosts and provided for us right royally. The instruction given me was to arrange with the best hotel to put up a first class banquet, and when it was over the local physicians were assessed pro rata per plate. This scheme worked out well, and never failed to secure a good meeting and full attendance. We planned an afternoon and evening session with the banquet at 6:30 p. m. between. After a thorough trial I can say that the banquet and smoker will do more to get the doctors together than anything of which I know. With us it has broken down all barriers of "ism" and "pathy" and we are content to meet as doctors only and not as the only doctors. We follow the teachings of Ruskin when he says, "When we allow our minds to dwell upon the points in which we differ from other people, we are wrong and in the power of the adversary—that is the essence of the Pharisee's prayer, 'Lord, I thank Thee that I am not as other men are.'" At every moment of our lives we should be try-

ing to find out not in what we differ from other people but in what we agree with them, and the moment we find we can agree as to anything that should be done, kind or good (and who but fools couldn't?) then do it. Push at it together. You can't quarrel in a side by side push, but the moment that even the best men stop pushing and begin talking, they mistake their pugnacity for piety and it is all over. The Ionia County Medical Society has decreed perpetual amity. The "Homeop" or the Eclectic is as welcome to stretch his legs under our mahogany, partake of our banquets, and smoke our cigars, as is the most dyed in the wool regular; and he is not loth to come, but is found at all our meetings, and we have made the discovery that he is as wise, and witty as the best; that he is a lovable and companionable man, a royal good fellow; we like him and he likes us, and so we grow, having good times among ourselves and finding approval among all the people. In a recent number of the Michigan State Journal is a paper giving at length what our society has done in setting to rights some things needful for correction. Among others a new fee bill, copies of which are presented for your consideration. This was an innovation, and like all new things on trial, has been subjected to the severest criticism, but after a year's crucial test comes forth established and justified. Some have faltered because of "cold feet" but the great majority have remained steadfast reaping a rich reward and have succeeded in impressing this fact on the minds of their patrons, that their services are worth all that the new charges call for.

To you who have not tried the entertainment idea I would suggest that in county seats and larger towns you get together and map out a plan of campaign. Write to all the doctors, especially those living remote, to come to the meeting. Inform them that their entertainment will be provided for, and do it in such a way that they will gladly respond. Tell them to drive to Hayfield's barn and leave the team, and go at once to the best hotel. Instruct Hayfield to have a man on the lookout for the doctor's team and give it the best of care. Arrange with the hotel proprietor to look to the comfort of the doctor on his arrival. Have also a committee to meet all trains and to escort visiting members to the hotel. Detail someone to act as host whose duty it shall be to welcome all, look after their comfort and entertainment, and to see that all are made acquainted. With stains of travel removed,

a good cigar and an easy chair, a pleasant room, an introduction to physicians and the renewal of old acquaintances, give a taste of luxury a tired man appreciates. Now follow this with a session of your society, a banquet and post-prandial speeches, and he must be indeed a very dull person who will not thaw out under the sunshine of such geniality. During this the secretary must be alert and active, saying the "kindest things in the kindest way," and before that doctor leaves the meeting that night his name will have been proposed for membership. He will have paid his dues, been voted in and carry home with him the resolution to be at every coming meeting and to add all he can to the growth and interest of the society. You may think that the cost would be greater than a few willing hands could bear, but it will not be. Country physicians cannot all come at one time, no matter how much they may wish to. Say you have in your county 50 physicians with a membership of 35 or 40, you will hardly ever get a meeting where an average of 15 will be exceeded. Let us say you have a dozen doctors in your town who are members of the society. Now you can arrange with the livery barn keeper and the hotel proprietor for special rates. These will furnish the best entertainment and when the cost is all assessed and paid you will find that your expense will not exceed \$1.00 per plate. In doing this you will have been at liberty to give attention to your business; you do not have to go from home to attend medical meetings and be paying out money for railway and other expenses. You will be partakers of the banquet, and of the fun, and of all the mental uplift of the meeting, and yet have the consciousness of having made a pleasant time for the other boys. You get a good, and a glow, out of this that is indescribable. Let me read from the vision of Sir Launfel by Lowell: "The Holy Supper is kept indeed In whatso we share with another's need, Not what we give, But what we share, For the Gift without the Giver is bare. Who giveth himself with his gift feeds three—Himself, his hungering neighbor and me."

On the secretary necessarily falls the carrying out of details, and unless he is self-sacrificing and willing to do all the work, he had best not seek the office, for without these necessary qualifications he will be a failure. The secretary must see that all bearings are well oiled or the machinery will be troubled with hot boxes. Be ever ready to spring pleasant surprises on the society. In-

corporate in your minutes pen pictures of men who have practiced in your locality, depict the salient points of character, contrast the work they did and the obstacles they overcame with those you have to contend with. Touch up the historic or geologic features of your locality, call attention to the wanton destruction of bird life, and the increasing abundance of insect pests. Discuss meteoric conditions and aerial navigation, anything to break the eternal long facedness of an old fashioned "Hark from the tombs" medical meeting. These interjected remarks of yours may be only a few well written lines, within whose meshes will be found seed thoughts prepared for germination. The secretary must himself be always ready to furnish a paper in case of failure of others, but must never appear on the program unless to fill a vacancy. He must ever have up his sleeve enough winning cards to make the game very interesting. If you are not willing to do all this, and more, you had best follow the warning placarded on buildings in process of erection, "No trespassing; Enter at your own risk. Keep out." Accepting the work of the secretary you must be "wise as serpents and harmless as doves." Diplomacy must be yours to the extent of your ability. This has been defined by a wag to be "the science of lying politely," and while this rendering may be at once comprehensive and explicit, it is still possible to acquire the proper "touch and go" without sin. Dealing with the individual membership, seek to bring forward the bashful and reticent; restrain the officious and self-seeking, and encourage growth and development. Be all things to all men that you may win all, is a good motto. "Be to their faults a little blind,

And to their virtues very kind."

We meet tonight on historic ground. Lands which have passed in possession through the hands of no less than three of the greatest dynasties of Europe. Spain, France, England and the Colonies, in succession battled for the country over which now floats in proud ascendancy, the thirteen barred banner of America, from out the folds of whose cerulean matrix, in time, perfected fullness, with nativity transcending that of King or Queen, was born each star of state. Prior to white occupancy the Saux, the Huron and the Iroquois lighted here their council fires. Into the virgin wilderness came the French chevalier resplendent in all the glory of costumes of the glittering court of Louis XIV. By the shores of this river the black robed priest erected the

crucifix, and here was established the outposts of European civilization. Here passed in fantastic garb Canadian voyageur, and Courier du Bois. Here Pontiac planned the destruction of the whites, and here was demonstrated the tenacity of English purpose and the superiority of Anglo-Saxon blood. Here Lewis Cass and Mad Anthony Wayne completed the final overthrow of the red man and established a line of demarcation at once the orientation of democracy and the delimitation of monarchical sway. Following the Indian treaties came the missionaries; those men who blaze the trails, and make easy the roads for the feet of civilization to tread. Like four green willows planted in moist soil, were the four men who gave bent and trend to thought in that early day. With John Montieth, the Methodist; Father Richard, the Catholic; O. C. Thompson, the Presbyterian, and John D. Pierson, the Congregationalist, Michigan began her scheme of scholarly instruction and religious teaching that gave us the Catholepistemiad of Michigania and buttressed strongly the foundations of universal education and religious toleration. In this city lived Dr. Pitcher, who evolved the idea of the common school as we now have it, of the people, for the people and by the people, and here our esteemed contemporary, Dr. Lear-tus Connor, thought out a plan of county, state and national medical federalization. It is a high privilege we this day enjoy. In all the glory of the accomplishments of the 20th century, we are called from every section of this vast commonwealth. Raised up for the purpose of deliberating on those things that shall up-lift the medical profession and carry it forward to wider fields of usefulness. Many of the notable events passed briefly in review have been of warfare and of conquest. In a time of profound peace we come together to discuss those things that shall make for peace and the perpetuation of peace. Not but that we too are warriors, of that soldiery enlisted for life, who camp all night in the enemies' country, and without food or drink or sleep if need be, keep watch and ward over the destinies of men, conserving life, mitigating pain, restoring lost function, cause the blind to see, the deaf to hear, the lame to walk, make possible the existence of white men in all latitudes and add years of usefulness to the tenure of human life by our teaching on hygiene, prophylaxis and therapy.

We as secretaries of county medical societies are closely representative of that great body of our confrères who are in the ordinary or general

practice of medicine. The man to whom the county medical society most appeals and whom it is designed to benefit is the country doctor. To him we reach out our hands, 'tis he we desire to help. In his long, lonely rides out under the stars, of what does he think? We cannot by telepathy or wireless message reach him, but by means of the county medical society, we are able to furnish a capstan about which he may cast the long rope of the anchor of his soul, and around this he can lay coil upon coil, the ripened fruits of a mentality that else must waste itself in nothingness or perish by decay. It is to reach him, to bring forth the best that is in him, and to do this in such a way that he shall feel exalted in the process that the society and the secretary must bend every effort. This is no boys' play. It will weary you, tax your ingenuity to the utmost, but you will reap a glorious harvest if you are faithful to the trust given you. By living apart the country doctor loses the touch needed to keep him up to concert pitch. Your society is designed to supply this contact and the talent of the secretary will be severely tried to accomplish this, but it can all be so tactfully done that the recipient will not only be thankful to you for your personal interest in him, but will in return bring to your counsels rich treasures of thought and experience, and while this is accomplishing, help to make of one brotherhood all practitioners and advance the status of the whole society.

The country doctor meditates as does no other man. He of all practitioners realizes most keenly that in his fingers are the fateful threads of life and death. His work is one of salvation, of construction, of defense. He is at once a thinker and a doer.

Though 'round his feet,
The cares of life
Continually be spread,
The sunshine of ennobling thought
Rests ever on his head.

Chairman: The discussion on Dr. Cope's paper will be opened by Dr. A. H. Burleson, Eaton.

Dr. Burleson: I, as a country doctor, want to thank several men here this afternoon for the compliments I have received as a country doctor. We appreciate them very much. We appreciate that the work we have to do, every man in the city has to do. I feel that the expression in the last paper is true, that it is a glorious privilege that we have at the present time, of reviewing

the work of our predecessors and listening to these papers. We can learn from them. I myself have gotten much from them this afternoon. There is a statement abroad that, as is the county secretary, so will the society be. I wish that statement was not abroad. I have worked thoroughly, and our society is composed of as good men as there are, I am satisfied, but to get them out to a society meeting I am almost unable.

Calhoun county at the time when the county societies were brought into their present form and efficiency, as units and individual parts of the state and national society, had as its secretary the present secretary of the council. I can find no more interesting example of the beneficial results of hustling to promote both the county and state societies than this.

Dr. Haughey worked faithfully to overcome the inertia of the older members of the profession and the stubbornness of some of the younger. He was persistent in bringing the reform before the county society and in arguing for the change. He did this even to the extent of arousing some ill-will. These same members, however, are at present enthusiastic workers under the present regime. He always pushed his work and usually accomplished his purpose. Largely as a result of his effort Calhoun society is one of the most wideawake of any with which I am acquainted. Of course he was ably assisted by such men as Drs. Alvord, Hafford and others in the county.

It is difficult to specify any of the methods used to make the above mentioned society what it is, but in a general way it was and is done by persistent hard work. To get the best results in a county society, it seems to me to be absolutely necessary to have several men in the society who are more or less independent of their practice, who may be called upon by the secretary to do extra work.

The almost universal rule that one can oftener get help from the busy than from another not so busy, is not absolutely true in our profession. Many of us are willing and ready to do extra work, when it can be done at the office or at odd moments, but who cannot leave our work or take a day or two off too frequently.

Especially is this true of the country practitioner who lives several miles from a railroad and who must perhaps lose 18 or 20 hours to take part in a few hours' session. For these I know of no better way than to have a synopsis of the papers prepared and sent to each individ-

ual member (as is always done in the published programs of the state society).

The past year we have made the programs of the Eaton county society very interesting by making each meeting public and inviting every one to be present. We have had dentists, school teachers, preachers and lawyers take part, and I am prepared to admit that the most interesting as well as instructive papers were not always rendered by the doctors.

I fear the suggestion of Dr. McCormack of having regular meetings held in various cities and villages to discuss topics of interest to the profession was not acted upon in our county. I am convinced that our members are fully up to the times, but it is not manifested in this way.

The question of banquets for the society, at intervals, is intimately related with a thought suggested above. Many of us think we have done our full duty by attending the literary meetings and working in and for it.

We think we cannot take the time and trouble (to call riding home across country ten miles, perhaps in a storm, by no harsher name) to spend several hours more time on a pleasure trip. It is easy for those who live on a railroad, but a long drive is another matter.

We have had much trouble in Eaton county in keeping a respectable percentage of the profession in the society. Our meetings and papers are interesting, but we are unable to get the members out.

A printed program is sent to each practitioner, but very few pay any attention to it. I have today received a number of hints which I trust will be beneficial to our society.

Chairman: The secretary has a letter which he will read to you.

Secretary Inch:

SCOTLAND, PA., Sept. 23, 1908.

Drs. Schenck, Inch and Warnshuis, and Michigan State Medical Society's County Secretaries' Association:

The Conference of County Secretaries of the State Medical Society of Pennsylvania herewith sends greetings and compliments to Michigan State Medical Society's County Secretaries' Association in their first annual meeting. We have just held our third annual meeting at Cambridge Springs, Pa. We hope to exert much good for

better organization, social and economic relations, of the profession of our state.

Sincerely,

H. W. GASS, President.

JOHN J. COFFMAN, Secretary.

Dr. Bower: I move that the greetings of this society be tendered to the society in Pennsylvania.

Supported and carried.

Drs. A. S. Kimball, Calhoun, and C. S. Cope, Ionia, were appointed a committee to draft a constitution, after which the meeting adjourned to the dining room.

At eight o'clock the meeting was called to order and Dr. B. R. Schenck, state secretary, read a paper on "**The Michigan State Medical Society—What, When, Where, Why and How It Is.**"

Dr. Schenck: I have selected the title "**The Michigan State Medical Society—What, When, Where, Why and How It Is,**" in order that I may bring before you various phases of the work of medical organization in our state. It is entirely without the intended scope of my remarks to dwell at any great length upon the necessity or the advantages of organization, or to deliver an oration upon the strength and greatness of our society. These things are well known to you. Rather is it my idea to bring before you, the active toilers in this important work, my conception of the relation of the county societies to the state society and thus answer the questions *what*, *when* and *where* the state society is; to epitomize the objects of the state society under the caption, *why* it is; to touch upon many points bearing upon the relations of you, the county secretaries, and myself, the state secretary, and to attempt to give you some knowledge of the bookkeeping, record making and journal editing under the heading, *how* it is.

What it is. To those who have watched the development of medical organization during the past ten years, there is more and more apparent the growth of the idea that the center of what Dr. Leartus Connor has called the "Communal Life of Physicians" is the county society. It is to the local organization that the individual physician owes his first allegiance. If the local organizations are supported and built up into what they are possible of becoming, there may be no fears as to the prosperity of the state or the national organizations. The state organization

as conceived by the men who have given the subject the most thought, is but the aggregation of the county societies' activities. It is but the sum total of effort and achievement as manifested in the local organizations. The influence of the state society is often great, for it acts *en masse*, as it were, but compare for a moment, its influence, meeting as it does but once a year and having in attendance never more than one-fourth of its membership, with that vast influence which is exerted by our 55 active county societies, meeting weekly, bi-weekly, monthly, bi-monthly, or quarterly. There are scheduled for the counties of this state during the coming year, 392 different meetings, with an attendance which I have very conservatively estimated as 7,250. What a magnificent showing of kindly feeling, earnest helpfulness, good cheer and good fellowship this means! If then the county unit is the important factor in medical communal life, what is the state society—as before cited, looking at it in its broader sense, it is this aggregate of 7,250 in attendance at 392 branch meetings. It is the great centripetal force which binds these 55 units together, striving to keep them working in harmony, supplying ideas, new motives and new ideals. Tuscola works out a new idea not only for itself, but for Jackson and for Genesee and for Marquette as well. Kent takes up new activities, they are made known through the councilors or through the pages of the Journal—i. e., through the channels of the state organization—to Kalamazoo, to Muskegon, and to Houghton. When Wayne works out a successful scheme for medical defense, does she do it for herself alone? Does she not rather do it as well for the state society—meaning every other county in the state? Does she not do it—her small share—as well for the whole profession of America as reached through the American Medical Association of which Wayne is an integral part? It is the conception of the state society as merely a body of men which meets yearly for a two-day session of scientific and social intercourse and lying dormant between whiles; it is this old conception which I wish to combat. And right here, let us look for a moment at our relations with the American Medical Association. Despite the half dozen or more years since the American Medical Association broadened its scope, despite the constant attempts at explanation and re-explanation which have been made, there are still many who fail to grasp this idea of unit organization, and still look upon the national society as active but

once a year, at its meeting at Chicago, Atlantic City, or elsewhere, as a society to belong to which is an honor. It is *no* honor to belong to the American Medical Association. Honorable is it rather to belong to the county society, where one is elected by those who know his true worth and character, again demonstrating the paramount importance of the county society. I hope to live to see the time when the question of dues will be eliminated and every member of every county society will be *ipso facto* a member of the American Medical Association, as he is now of the state society.

Think then of our state society as existing every day in the 365, think of your own county society—be it small or large—as part of this greater organization—think of your activities, your struggles and your successes as a part of the activities, struggles and successes of the larger society, and you will have what I believe is the true conception of *what* the state society is, *where* it is and *when* it is.

We cannot better answer the question, *Why the state society is*, than by quoting from Article II. of our Constitution. Listen while I read it:

ARTICLE II.—PURPOSE OF THE SOCIETY.

The purpose of this society shall be to federate and to bring into one compact organization the entire medical profession of the State of Michigan and to unite with similar societies in other states to form the American Medical Association; with a view to the extension of medical knowledge, and to the advancement of medical science; to the elevation of the standard of medical education, and to the enactment and enforcement of just medical laws; to the promotion of friendly intercourse among physicians, and to the guarding and fostering of their material interests; and to the enlightenment and direction of public opinion in regard to the great problems of state medicine; so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life.

We have now been practically six years under this constitution. Let us see how well we have succeeded in carrying out these noble motives as expressed in the paragraph just read.

(a) Note—"The purpose of this society shall

be to bring into one compact organization the entire medical profession of the State of Michigan." What progress have we made?

When the first edition of the A. M. A. directory was being prepared, lists were made of all the physicians arranged by counties. Before the galleys were broken up for the arrangement by cities and towns, proofs were taken and these were most valuable, as they afforded us the first county lists which we have had. There are certain errors in the preliminary lists, but on the whole they are fairly correct.

Basing our figures on these lists we find that there are in the state 4,202 physicians. Last year we had 1,975 paid members in the state society, or 47 per cent. The number 4,202 must be understood as including all the legally registered physicians. It includes many who are not in practice and who are not desirable. It must be discounted probably 25 to 35 per cent, making the probable number of physicians eligible to membership about 3,100, of which we have 63 per cent.

The growth in our membership since reorganization was at first rapid, jumping from 600 to almost 1,600 in the first two years. Since 1904, the paid membership has steadily but slowly increased. In 1906 it was 1,873, and in 1907, 1,975. The question arises, are we doing all we can and should to bring into one compact organization the entire medical profession of the State of Michigan? It seems to me that we ought to have at least 500 more members. A man who has been a member ought never to be dropped because of retirement on account of age. If he has been worthy, he should be made an honorary member. Such action will do him good and the society good. A few societies have practically every eligible man enrolled, but especially in the larger counties, there is an opportunity for missionary work. If each county secretary would prepare a list of eligibles, submit it at some meeting, apportion the names on the list among the members, asking them to invite them personally and hand out an application blank, much, it seems to me, might be accomplished. The office of the state secretary will be glad to send copies of the Journal and other literature to any whose names are sent in.

(b) A second purpose of our organization is to extend medical knowledge and advance medical science. I firmly believe that we are doing so. If you need to be convinced, look over the original articles published in the Journal when

it was established six years ago and compare them with those published today. I had no idea of the vast improvement until I put it to the test.

(c) We are pledged to elevate the standard of medical education. As part of the great American Medical Association, we are doing much in this direction. Ten years more of effort will put the medical schools of this country where we all wish to see them, and not a little of the credit will be due to our Council on Medical Education, encouraging which and backing which is every county medical society in this state.

In a broader and truer sense medical education has just begun when the young doctor of medicine leaves his alma mater, and it is in the county medical society that he continues his study, rounds out his knowledge and keeps abreast of the new things in his life's work. The county medical society—the one with a secretary who sees to it that the meetings are what they should be—is the greatest factor in the advancement of medical education which has ever been conceived. Are you doing all you can to supply this need?

(d) We are also enjoined to promote friendly intercourse among physicians and to guard and foster their material interests. The social features of a local society are second only to the scientific. In some counties the social features have been developed to their full extent; in others they are almost entirely lacking. I have observed that it is in the former counties that there is less strife, less wrangling, and less back-biting. The possibilities in the line of guarding and fostering the material interests of the profession are great—an hour might easily be filled in discussing them. The matter of collections, the question of county poor work, the problem of contract practice, the setting of fees for insurance examinations, the pooling of interests in regard to journal subscriptions and book buying, these are some of the live, active questions. The possibilities are almost infinite. We have just begun to see them, let alone carrying them out. It will take time to work them over and make them realities. Some questions, like that of contract practice, can only be handled by a slow, persistent campaign of education. Our recent state committee on contract practice accomplished perhaps but little, yet it set the profession in many places to talking about it, and gradually the sentiment against certain forms is growing. Next year it should be taken up again. We felt that we should have some compensation for the

registration of births. We went out for it and we have it. Small as is the fee, it is sufficient to pay all the expenses of the county societies in this state—certainly the dues of every doctor engaged in general practice. If you do not already know about it, ask the representatives of Tuscola county or the Tri-County society to tell you how they solved the question of county poor work.

In no way, it is certain, can the material interests of the profession be enhanced, except through organization and the *esprit de corps* of the live county society.

(e) And lastly we are to enlighten and direct public opinion in regard to the great problems of state medicine. Are we doing so? Yes, in spots. Why has the Kent county society come to be looked upon as a leader in questions of public welfare? Because it has a few members who are willing to work. What has been done in Kent can be done in Wayne, in Saginaw, in Bay, in Kalamazoo and in other counties having within their borders the larger cities.

We have done much, yet every year opportunities are being wasted. If they were but grasped we would find the "profession becoming more capable and honorable within itself, and more useful to the public in the prevention and cure of disease, and in prolonging and adding comfort to life."

These are some of the reasons *why* the state society is.

Under the caption, *How the state society is*, I want to bring up a number of points regarding your work and mine.

Membership. It is often asked, can a physician be a member of the county society and not of the state, or of the state and not of the county? Active membership cannot be held in one without the other. Some county societies have provision for associate membership open to druggists, chemists, dentists, etc. Such are not members of the state society and should pay no state dues. The state society can and does elect honorary members from those who have practiced medicine not less than thirty years and have been active members in good standing for at least ten years. Such may later drop out of their local organizations, but should be made honorary members there also. Can a physician live in one county and belong to another county society? If on account of convenience in attending meetings this is desired, it is allowable, but a man who is considered undesirable in one county should not be elected in another. The councilor

of the district should decide such questions.

Removals. When a member removes to another county, a transfer card should be granted. If the secretary hears of the removal it is a nice little courtesy to send such a transfer without request. All transfers as well as resignations and deaths should be sent to the state secretary at once. Often the first notice which we have of a death or a removal comes from the postmaster in notification of the non-delivery of the Journal. Now and then a notice comes marked "Died six months ago." Ought not the secretary to have sufficient regard for one of his dead colleagues to send a little obituary notice to the Journal—or at least a notification on a postal card?

Another question often asked is, "Suppose a member pays in 1905 and not in 1906 or 1907, must he pay up back dues in order to become an active member? He must either do so or come in as a new member, being proposed, investigated and elected in the ordinary way. If he pays back dues, the state's portion should be remitted. A physician is elected in September, must he pay \$2.00 for the rest of the current year? The fiscal year of the state society is from January 1st to December 31st. A new member coming in after July 1st and before the annual meeting of the county society (which in most societies occurs in the fall), should pay \$1.00 state dues to be credited until December 31st. If he is elected at the annual meeting, his dues are accepted as extending until December 31st of the following year.

The method of bookkeeping in the office of the state society is as follows: Two sets of cards are employed. One set is blue and contains the names, addresses and county society of the members. These cards are arranged alphabetically by name and serve as an index to the white cards. The white cards contain spaces for name, address, society, date of graduation, remarks, and payments up to 1920. These are arranged by county societies. A card is never destroyed. If the member dies, resigns or moves, it is so noted and the card is placed behind a blue dividing card which separates the active from the sometime members. In ten years this system will develop into a mass of valuable information. You are familiar with the certificate which is sent. Originally it was designed that these certificates signed in blank should be in the hands of the county secretary, the idea being that he should fill out both certificates and stub, giving the former to the member and sending the latter

with the \$2.00 to the state secretary for receipting. This would be the ideal arrangement, but we have had so many instances where members have had a receipt signed by the state secretary and treasurer, while we had no record of the \$2.00, that it seemed necessary to issue the certificates from the office of the state society. This was done to avoid the very unpleasant task of writing a county secretary that "Dr. Jones has our receipt for 1908 dues. Have you our receipted stub or have you neglected to send the money?" By the present method if there is a mistake in a receipt, it is our mistake.

Each month a list of changes in membership is forwarded to the American Medical Association. This is one reason why county secretaries should be absolutely prompt in forwarding new names or resignations. Every month Dr. Green writes me to the effect that "Dr. So-and-So of Here-and-There, has applied for membership in the American Medical Association as a member of Such-and-Such a county society. His name does not appear on your certified lists." It may have come in during the month, in which case it is immediately reported on a separate blank. More than likely it has not come in. We must write to the county secretary who must write back (after a week's delay), and then we must write to Dr. Green. In the meantime Dr. So-and-So conceives the idea that he is not over acceptable to the American Medical Association and writes Dr. Green or myself wanting to know if he isn't ethical or why he isn't eligible to the A. M. A. We write him as polite a letter of explanation as we can couch and he writes back, "To the dickens with the red tape of medical organization," or strains to that effect. And it is all so easy. There isn't any red tape. It is automatic, but like all automatons its smooth working depends upon every wheel being in working order, of which wheels the county secretary is the most important.

One of the most difficult tasks of the state office is to keep up the membership. At the present moment there are 300 who have not paid for 1908. On September 1st, we sent a letter on a special blank to each county secretary with a list of those who paid for 1907 and who had not paid for 1908. It is especially noted on this blank—"please return promptly with notes as to resignations, removals, deaths and possible errors." How many do you suppose have come back? Twenty-two out of 55. On nearly all returned are notes of resignations, removals, and deaths—

the first notice to that effect which we have had. In a few instances, misspelled names have been noted. In one instance failure to credit dues was found. On October 1st, individual notices will be sent delinquents. In this way we will get in 200 of the 300 unpaid members. Each year about 100 fail to pay, despite strenuous efforts. The postoffice authorities have ruled that hereafter a periodical can be sent but four months unless paid for in advance. If we take all delinquents off our mailing list in May it will mean a great deal of confusion, for dues will come in in July, in August, and in September, with requests for back numbers, some of which will be out of print. Will you not therefore make a strenuous effort to get in 1909 dues early?

Our Journal. I often wonder what percentage of our circulation goes into the waste basket, envelope and all. Perhaps we write a little editorial asking the county secretaries to respond as to what they think of having a meeting such as this. This is read (or isn't it?) by 55 county secretaries; one poor lone answer comes creeping in from the western part of the state, but that makes up in enthusiasm for the absence of the other fifty-four. I sometimes wonder if anybody reads what we write and ponder as to the use of so much work. Then along comes a letter from some out-of-the-way place commending this feature or that, or from the author of a book saying that our notice is the fairest which he has yet seen, or a dozen replies come from some want "ad," or a request is received for more information about a subject noted in the abstract department, or an objection comes from some one who has read his own death notice, then I begin to take heart and surmise that perhaps, after all, the Journal is read by quite a number of those who receive it. But the unvarnished truth is that our Journal is not as good as it should be and not as interesting as it might be. With the original articles I have no fault to find. They are as good as the talent of the state can produce, and it is not the function of our state Journal to seek original articles elsewhere. Each year they are being more and more abstracted by our exchanges, a sign that they are steadily improving. Our editorials may be poorly written, but I believe they are, for the most part, timely, for much thought is given to present, even ever so poorly, topics which are seasonable. Our book reviews have been recognized as the best among the small journals, in

proof of which we are overwhelmed with books for review from the various publishers. You may have noticed that most reviews are commendatory. This is because no notice is made of the poor books, unless they are so bad as to deserve harsh criticism. Our reports of county societies are good as far as they go. Our news columns are atrocious. Our abstracts, about the utility of which there is a wide diversity of opinion, are carefully made by good men. Some consider them too scientific; some too trivial. They are probably as good as the space given up to them will allow. On the whole, Michigan has not the worst as it has not the best state journal. It has as good as any of the states having an equal membership. Such is my candid opinion of our Journal.

But why is it not better? Why is it not more interesting to the average reader? The former editors, Drs. Biddle and Connor, set the Journal on a high plane when it was founded, and Dr. Oakman and I have striven to maintain both its tone and its dignity. We are proud to say that a medical rhyme, a medical joke, or the pseudo-humorous medical article which pervades the pages of many of the smaller journals, and not a few of those controlled by the state societies, have never soiled its pages. We are working hard to make it better. Much time is spent in editing the original articles and in reading the proof. Errors occur. Ninety per cent of them, however, are errors which come into the page proof as the result of the correction of another error in the same line. With machine work this is inevitable unless the proof is read a third time, often meaning the delay of 24 or 36 hours, and always meaning the expenditure of considerable time and labor.

The Journal is not more interesting because it has not sufficient local news. If each one of these 392 meetings mentioned were fully reported by the secretaries, it would not be three months before 90 per cent of those receiving the Journal would watch for it and read it eagerly. If we had news columns such as might result from 55 secretaries sending in monthly notes, we would not need to blush for that department. Every man likes the sensation of seeing his name in print. If he thinks his discussion on some topic is to appear in the next month's Journal, he will watch for it and he will read it. But we cannot have these reports unless they are sent, and we cannot fill the news columns without news. Will you, who are here today, not make, this moment,

a solemn vow to have your society well represented in the Journal during the coming winter?

In conclusion I want to urge upon you the necessity of giving to your county society constant thought. There are opportunities in every community. Someone must take the initiative, someone must do the work, and someone must bear the criticism. The county secretary is the one. The state society is but the aggregate of the county organizations. Its strength depends upon the strength of its individual units. If we all work together, we can and we will accomplish results such as have heretofore been but dreams.

Dr. Frederick R. Green, of Chicago, assistant to the secretary of the American Medical Association, gave a most interesting and valuable talk on "Unity in Medical Organization," in which he set forth the work which the A. M. A. is endeavoring to do through the county societies.

The committee appointed to arrange a constitution reported the following, which was adopted:

ARTICLE I.

This organization shall be known as the Association of County Secretaries of the Michigan State Medical Society.

ARTICLE II.

The purpose of this association shall be to bring together annually, the secretaries of the various county societies of Michigan to discuss plans for maintaining and furthering the organization.

ARTICLE III.

The place of meeting of this association shall be in the City of Detroit, or such other place as may be chosen by the association in regular session.

ARTICLE IV.

The time of meeting of this association shall be the same as that of the Council in January, or such other time as the association may decide in regular session.

ARTICLE V.

The membership of this association shall be composed of all the secretaries of the county medical societies of the Michigan State Medical Society.

ARTICLE VI.

The executive officers and the Councilors of the Michigan State Medical Society shall be honorary members of this association.

ARTICLE VII.

The officers of this association shall be a president, vice-president, and secretary, who shall be elected annually by ballot.

ARTICLE VIII.

Amendments to this constitution may be made by a majority vote of members present in any regular session.

Officers were elected as follows: President, F. C. Warnshuis, Kent; vice-president, A. S. Kimball, Calhoun; secretary, G. F. Inch, Kalamazoo Academy of Medicine.

News

Dr. Henry M. Cunningham of Marquette has returned from abroad.

Dr. and Mrs. H. J. Hornbogen of Marquette have sailed for Europe.

Dr. Max Ballin of Detroit has returned from a month's absence in Europe. A complimentary dinner was tendered him by a few of his colleagues.

The tuberculosis agitation has resulted in Kalamazoo raising \$700.00, by means of a "Blue Star" day for public donations, and a tent colony has been established in the suburbs for advanced cases.

Drs. Lester J. Harris and Frank J. Gibson have been appointed to the medical staff of the White Cross Sanitarium, Jackson.

The Michigan exhibit at the Congress on Tuberculosis, recently held in Washington, was so excellent as to elicit a request from the Anti-Tuberculosis Society of New York to borrow it for exhibition in that city.

Dr. Roy E. Cuthbertson of Orchard Lake has been appointed to the medical corps of the U. S. navy, and will be resident in Washington, D. C., for several months.

Dr. Town of Grand Ledge has retired from active practice and sold his rights to Dr. G. D. Green of Holt.

The Grand Rapids Anti-Tuberculosis Society has been actively engaged in real work since August. A free clinic has been in operation, where over 40 persons have been examined and eleven positive cases discovered.

Dr. Randall Schuyler of Ann Arbor recently narrowly escaped death, in the wreck of the steamer Neshoto near Crisp Point in Lake Superior. He clung to a floating hatch cover for two hours before reaching shore, and then had to walk three miles to reach human habitation.

Dr. L. Fleckenstein has been appointed as health officer of Vernon, to succeed Dr. Wm. I. Whittaker, resigned.

Drs. I. N. Brainerd and J. N. Day are to deliver a series of public lectures in Alma upon the subject of Tuberculosis, under the auspices of the Ladies' Civic Improvement League.

In two or three weeks' time 18 cases of typhoid fever recently developed in the Michigan Home for Feeble-Minded, at Lapeer, with three deaths. An investigation has failed to show the origin of the disease.

Dr. H. E. McLennon, Battle Creek, is reported to have given up the practice of medicine, to go into the lumber business in Detroit.

An epidemic of diphtheria is reported to be prevalent in Augusta.

Marriages

Thomas Patton Camelon, M. D., to Miss Edith Leroy Hartwell, both of Detroit, September 15.

Russell Sturgis Rowland, M. D., Detroit, to Miss Margaret Lily Chace of Providence, R. I., October 14.

Thomas B. O'Keefe, Grand Rapids, to Mrs. Julia Shanwald, New York, in Washington, September 31.

Joseph L. McNeece, M. D., of Morley, to Miss Emma Belle Lehn, of Newark, N. J., September 25.

Stephen James O'Brien, M. D., to Miss Clara Eletha Crawford, both of Grand Marais, October 15.

Progress of Medical Science

MEDICINE.

Conducted by

T. B. COOLEY, M. D.

Tabes and Lues.—SCHUETZE reviews briefly the history of the Wassermann reaction, and the results obtained with it by himself and others, which show it to be positive in about 80% of all cases of unquestionable syphilis, and invariably negative in cases which are certainly not syphilitic; so that it is evidently a specific reaction. He then gives details of series of 100 cases of tabes tested by him at Moabit Hospital for the reaction. He used practically the same technic as Wassermann does and does not think that any of the newer, simplified methods have been proved to be reliable.

Of his 100 patients, 76 were males, and 24 females. Blood-serum was taken for the test in 71 cases, spinal fluid in 21, and both serum and spinal fluid in 8. Reaction was positive in 69 cases—52 males and 17 females. Forty-five positive reactions were with serum, 6 with serum and spinal fluid, and 18 with the spinal fluid. Reaction was not obtained in 7 out of 49 men who acknowledged syphilis, while all the 5 women who gave a syphilitic history reacted; of 25 men who denied syphilis, 7 gave the reaction, as did 4 of the 10 women who denied it. All of the 11 cases, men and women, whose history was doubtful, gave positive reaction.

SCHUETZE draws no conclusions from this series as to whether and to what extent the reaction is effected by a previous course of treatment with mercury, as most of these patients were tested but once. He has, however, noted in other cases that the reaction becomes less marked or disappears at times after a course of injections, and in the present cases there were a number of negative results in patients who had undergone systematic antisyphilitic treatment. He is thoroughly convinced of the great value of the Wassermann reaction, but thinks that for the present we must continue to use the complicated, but reliable technic of Wassermann, and not depend upon any of the simpler substitutes lately proposed.—*Zeitsch. f. Klin. Med.* Vol. 65, p. 397.

Serum Treatment of Cerebrospinal Meningitis.—MORGAN and WILKINSON report their results in ten cases of epidemic meningitis treated

with Flexner's serum. The cases were all fairly typical. Three of the patients died, and of these one case,—that of an infant with chronic hydrocephalus,—was hopeless before the administration of serum. Omitting this, the mortality in the other nine was 22.2%, as compared with 65% to 85% under ordinary treatment.

The earliest day of the disease on which serum was administered was the fourth; the latest, the forty-ninth. In six cases the injections were between the seventh and thirty-fourth days, all patients recovering. The largest dose administered at any one time was 30 c.c.; the smallest, 5 c.c. All injections were made into the spinal canal. None of the cases were injected so early in the disease as they probably should have been, and this may have influenced the necessity for the various larger doses. The *diplococcus intracellularis* was found in all cases, while two were cases of a mixed infection.

The authors' conclusions are:

1. Following the serum injections there was usually considerable improvement in the clinical symptoms.
2. The course of the disease was considerably modified; an average for twenty-three days for all seven, and in five of the cases fifteen days.
3. Only two patients who recovered suffered from sequelæ.
4. The serum caused a marked diminution in the number of diplococci in the spinal fluid; a disappearance or a degeneration of the organism in coverslip, and in the majority of cases its growth was promptly inhibited.
5. Phagocytosis was either unchanged or increased.

6. In five out of eight cases the leucocytes showed degenerative changes following the serum injections. This explains the rapid clearing of the fluid observed following the injections.

7. The leucocyte count rose in three cases, in all of which the patients recovered. It fell in five cases, in two of which the patients died.

8. The disappearance of the (influenza) bacillus in Case 2, and probable disappearance of that in Case 6, suggest the use of an indifferent serum in influenza meningitis.—*Arch. Pub. Med.* Oct. 1908.

SURGERY

Conducted by

C. S. OAKMAN, M. D.

The Diagnosis of Duodenal Ulcer.—B. G. A. MOYNIHAN calls attention to certain features of the history in cases of duodenal ulcer, in a discussion before the Chicago Medical Society. The pain experienced by these patients comes on some time after eating,—from one-half to four hours. The period immediately following the ingestion of food is the most comfortable in the whole day. The pain is often preceded by a sense of uneasiness in the epigastrium, then by a burning gnawing sensation, with bitter taste in the mouth, and eructations of food or gas. Belching, or pressure exerted over the stomach sometimes affords relief. As the pain increases, it radiates through to the back, on the right side. The taking of food relieves the pain, which sometimes is so severe as to be described as colic. Appetite is generally good, and vomiting is not common. There is seldom stasis of stomach contents, and frequently hyper-acidity.

The pain may be a daily occurrence for weeks or months and then pass away, to recur again at irregular intervals. The attacks occur more often in cold weather, and in times of stress or worry. The diagnoses usually made in such cases are "chronic gastritis," "acid dyspepsia," "hyperchlorhydria." The author believes that duodenal is more serious than gastric ulcer and should be treated surgically. Gastro-enterostomy is the proper procedure, with an effort to infold the ulcer, if it is accessible, to prevent hemorrhage or perforation. The most satisfactory method of doing gastro-enterostomy is the posterior no-loop operation, with the bowel applied nearly vertically. Regurgitant vomiting after this operation is relieved by enteroanastomosis. The writer concludes that in cases showing real organic disease of stomach or duodenum surgery causes few deaths and many cures; if there is little or no evidence of structural change, the results of surgery have been nil or positively harmful.—*Surgery, Gynecology, and Obstetrics*. Oct. 1908.

Notes on the Arrest of Hepatic Hemorrhage Due to Trauma.—J. H. PRINGLE, Glasgow, writes upon this subject from a personal experience of

eight cases, all of which were fatal. He tried various methods of controlling the bleeding in these several cases, and has performed experiments upon animals. He points out that a certain degree of hepatic hemorrhage is arrested naturally by the effect of the increased abdominal tension. This is shown in cases that have been operated on, where active bleeding had ceased, as evidenced by clots, only to begin again soon after the pressure is released by the celiotomy wound. He concludes that the abdomen should be opened as soon as the diagnosis is certain, the portal vein and hepatic artery should be compressed, to control the bleeding, and the hepatic wounds closed by ligation in mass or by gauze packing. For the purpose of suturing, he uses short, blunt, curved needles of soft steel, and does not approve the other mechanical devices, such as whalebone or magnesium strips.—*Annals of Surgery*, Oct. '08.

The Principle of Cerebral Decompression.—MUMFORD mentions that resection of parts of the skull to diminish intracranial pressure has been done for cerebral tumor more than for anything else; there are, however, other conditions which respond to the same treatment, and he recites three interesting cases in his own practice to illustrate this point. One was a case of Jacksonian epilepsy, following upon a head-injury, in a young man of twenty-one. The attacks consisted of twitchings of the right arm, with rarely a fit of unconsciousness. The second case was one of diffuse suppurative lepto-meningitis, resulting from a basal fracture, in a man of fifty, with symptoms of sepsis and intracranial pressure,—rising pulse, restlessness, headache, cyanosis. The third case was a man of forty-four who developed headaches, paresis of left arm and leg, urinary incontinence, and inequality of pupils after a fall. The paresis and incontinence passed away, but the other symptoms persisted, accompanied by loss of weight, and a changed mentality.

These cases were all subjected to the removal of large bone-flaps, opening of the dura, and relief of tension, and they all recovered.—*St. Paul Med. J.* '08.

PHARMACOLOGY AND THERAPEUTICS

Conducted by

H. A. FREUND, M. D.

Treatment of Cerebro-spinal Meningitis.—MORGAN AND WILKINSON give an excellent report, and complete study of ten cases of cerebro-spinal meningitis treated with Flexner's antimeningitis serum. During the epidemic in Washington in the early part of the present year, of ten cases treated at Garfield Hospital seven recovered and three died. This mortality of 30% the writers compare with a mortality of 81.9% in 1898-9. The injections were not made earlier in the course of the disease than the fourth day. The authors give a tabulated summary of the clinical signs that is of interest. They found the organism in the smears of spinal fluid from every case. They withdrew an amount of spinal fluid proportionate to the amount of serum to be injected. This varied from 5 c.c. to 30 c.c. Following the serum-injections there was usually considerable improvement in the clinical symptoms. The course of the disease was considerably modified; an average of twenty-three days for all seven, and in five of the cases, fifteen days. Only two patients who recovered suffered from sequelæ. The serum caused a marked diminution in the number of diplococci in the spinal fluid, a disappearance or degeneration of the organism in coverslips, and in the majority of cases its growth was promptly inhibited. Phagocytosis was either unchanged or increased. In five out of eight cases the leucocytes showed degenerative changes following the serum injections. The leucocyte count rose in three cases, in all of which the patients recovered. It fell in five cases, in two of which the patients died.—*Arch. of Int. Med.*, Oct. 1908.

Blood Pressure Lowering Reflexes from Irrigation of the Chest.—CARLIS and LEWIS have investigated a very important subject,—the blood pressure lowering reflexes from irrigation of the chest in empyema. They produced artificial empyemas in dogs and irrigated with various irritant, antiseptic and bland solutions. Their results are worthy of note, and should be considered by every physician, who carries on flushing of the pleural cavity with various solutions that may induce either an exciter or a depressor influence on the arterial circulation.

Comparing the effect on the blood pressure of healthy dogs with that of empyema dogs, when a given solution is used for irrigation, they conclude that tendency to reflex disturbances is the same in kind, but that the frequency of the reflexes and their severity is much more marked in the empyema dogs than in the healthy animals. Hot-water irrigation has a tendency to elevate blood pressure slightly. Cold water tends to lower blood pressure to a slight degree. Lugol's solution occasionally produces a marked fall in blood pressure, but the effect is transitory. Formalin (2%) in glycerin often sets up a depressor reflex, and this is sometimes dangerous to life. Hydrogen peroxid is seldom a menace to dogs,

but is frequently so to those with empyema. Death may ensue even when the gas is allowed to escape. The comparative rarity of depressor reflexes during irrigation of empyema in man, as compared with those occurring in animal experiments, is probably due to the fact that in the old empyemas of man the pleura is usually protected by a thick fibrinous exudate. This protection, however, can not be relied on and, therefore, the practice of irrigating the pleural cavity with antiseptic solutions is not free from danger. Adrenalin administered intravenously helps to restore blood pressure, but its action is not lasting. Artificial respiration by intermittent positive pressure is the most reliable means of restoring and maintaining blood pressure, and also exerts a powerful preventative influence on the depressor nerves. As long as air is regularly and intermittently forced into the lungs under moderate pressure, depressor reflexes are not easily elicited by irritation of the pleural nerve endings.—*Arch. of Int. Med.*, Sept. 1908.

Asthma, Dyspnea, and Stomach-cough.—

At a clinical lecture at the Hospital Tenon, LEVEN drew attention to the frequent occurrence of cases of asthma, of dyspnea, or of cough which are really dependent upon dyspeptic conditions. After discussing the pathogeny of these affections, he quoted several observations of patients who had been relieved, simply by gastric treatment, of their cough, or their asthmatic or dyspneic troubles. Treatment must mainly be directed against the dyspepsia. When the symptoms of this are not very marked, it is sometimes sufficient, in order to relieve the patients, to prohibit bread, wine, and sundry indigestible foods, such as cabbage, beef, uncooked foods, salads, vinegar, spices. In some cases it is necessary to forbid meat. Vegetarian diet is kept up for 15 to 30 days, and then, for several weeks, a small quantity of meat is allowed. The vegetables are given in purees. Warm drinks should be taken with the meals. The food must be thoroughly masticated, and after each meal a rest should be taken on a long chair. Anti-asthmatic remedies, the iodides for instance, are useless. If the patient has an asthmatic attack, warm drinks are given, and poultices and wet compresses applied to the abdomen and thorax. The irritability of the stomach can be allayed by syrup of codeia, one teaspoonful a quarter of an hour before each meal, or by allowing the patient to take every three hours through the day, and at night, if he is sleepless, a pinch of this mixture:—Rx.

Cretæ Preparatæ.....5iss

Bismuthi Subnit.5j.

Misce. Fiat pulv.

Mineral waters are harmful when dyspepsia is present, but useful when it is relieved.—*La Trib. Med.*, Sept., 1908.

PATHOLOGY AND BACTERIOLOGY.

Conducted by

C. E. SIMPSON, M. D.

Diffuse Peritonitis in Women.—Of 338 cases of diffuse peritonitis reported by several observers, 218 were due to appendicitis, gastric ulcer was the cause of 27, bowel ulcer of 140, and infection of the gall bladder of 8. Extension of infection from pelvic inflammatory disease caused diffuse peritonitis in 28 cases. The author then reports 50 cases in which the infection was from the bowel in 21 and of pelvic origin in 13, excluding the 12 cases associated with pregnancy.

Considered from the point of etiology it was seen that the streptococcus was most frequently met and the colon bacillus next. Streptococcus infection of the peritoneum occurs in two ways, either by rupture or perforation of the intestine or rupture of an abscess, or, second, by extension of the infection through the lymphatics as is the case most frequently in puerperal infection. In streptococcus peritonitis, pus is usually very generally distributed throughout the abdominal cavity with little or no effort at repair, the gut is dry, glazed, and distended, and intestinal paralysis soon follows. Staphylococcus infection is also common and is frequently marked by metastatic abscess formation. Gonococcus infection is rare and usually not severe. Women are much less subject to tubercular infection of the peritoneum than are men and in them its origin is genital in 40 per cent.

Peritonitis during the puerperium may be divided into two forms: that from a previous focus of infection and lymphatic peritonitis. In the first class the organism does not pass through the genital canal but is the result of the lighting up of a previous focus of infection, as the rupture of pus tubes, infection of ovarian cysts, etc. Lymphatic peritonitis is usually of streptococcus origin and is marked by its severity. Here the infection is introduced from without the birth canal and is then taken up by the lymphatics.

The writer then goes on to discuss the diagnosis of diffuse peritonitis and its treatment.—ELLICE McDONALD in *Surgery, Gynecology and Obstetrics*, Vol. 7, page 299.

The Transmission of Tuberculosis.—The important question of the transmission of tuberculosis has of late been investigated experimentally by several workers. Among them is G.

Kuss, who gives the details of his experiments which prove that infected sputum is by no means harmless when it has become dry and pulverized. In his experiments he tried to make the conditions under which his animals lived similar to those surrounding human beings, examining dust from fabrics that had been dried and then swept, that had been kept in dark corners, etc. His conclusions are that sputum under favorable conditions may become dry rapidly and be easily reduced to a fine dust, especially by sweeping. Such dust is extremely virulent when desiccation has occurred rapidly and in darkness. It is easy to infect guinea pigs by making them breathe air filled with dust from sweeping such locations. Such tuberculosis is anatomically similar to primary infantile tuberculosis. Such findings seem to establish the fact definitely that dry infected sputum is to be feared as a source of tuberculosis.—*Bulletin Medical*.

The Transmission of Bovine Tuberculosis to Man.—STEFFENHAGEN gives a summary of the findings made in the German Royal Department of Health, altogether 140 cases of tuberculosis having been investigated. Of these 117 were found to be infected with the human type of the bacillus; 21, all children, with the bacillus of bovine tuberculosis, and 3 with both types. Of these infected with the bovine type alone, 13 showed primary infection of the intestine and mesenteric glands, and six were cases of tuberculosis of the cervical glands. These figures must not be taken as indicating the relative frequency of infection with the bovine and human types of disease because special care was taken to investigate children in whom the site of the disease and the history suggested the possibility of a bovine infection. It seems certain, however, that in childhood the infection of the gastro-intestinal tract and of the cervical glands with the bovine type of bacilli is much more frequent than Koch's much discussed statement would lead one to believe. So far as children are concerned the protection of their food from infection with bovine bacilli is imperative, and such protective means for the most part proper measures for obtaining pure milk or rendering milk harmless.—*Medical Record*, Vol. 74, page 533, abstracted from *Berl. klin. Woch.*, Aug. 17, '08.

PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

What Suggestion Can Do for Children. In a recent popular article Rev. ELWOOD WORCESTER, D.D., Ph.D., gives much of interest to the physician as well as the layman, regarding suggestions given to children in natural sleep.

Dr. Worcester says that of all human beings children are the most suggestible, the successful teacher controls her charge by this means. In addition to intoxicating our children with joy and teaching them through the spirit of play, there is a third method of influencing the child soul, absolutely harmless and frequently very efficacious; it is by addressing our children in natural sleep.

The explanation is something as follows: A certain degree of abstraction is almost indispensable to suggestion. In natural sleep the spoken suggestion encounters no rivalry or opposition. It occupies the field of consciousness exclusively, hence it is more likely to succeed. Our last waking thoughts are as a rule the most important which we ever think, for the reason that they persist in the mind during the period when the mind is most suggestible.

Apart from the simplicity and ease of this method of suggestion it is peculiarly valuable in the treatment of children on account of the extreme suggestibility of the child and because of the depth of childhood sleep. Suggestion so given sinks deep into the mind of a sleeping child and emerges as his own thoughts and purpose. According to the writer's belief these suggestions are addressed to the subconscious mind. The results which follow are due to the fact that the suggestions are not offset by counter-suggestions or thwarted by paralyzing doubts.

During the past two years Dr. Worcester has treated over a hundred children. The records show slight improvement in 8 per cent of the cases, marked improvement in about 45 per cent, while in 35 per cent the treatment was perfectly successful, leaving only 12 per cent in which no change was discernible.

In describing his method of procedure the author says that it is of the most importance that the child should not be startled or disturbed, so he prefers that the suggestion should be given

by the mother if she have faith in the method and sufficient intelligence and force of character to employ it successfully. Faith on the part of the operator is of prime importance. Mere perfunctory statements have no effect on the sick or well. It is best that the child should not be informed of the effort made in its behalf in order that there may be no opposition on its part and no counter-suggestions. The suggestion should be repeated several times in different words. The language should be simple and adapted to the child's comprehension. The words should be spoken in a low earnest tone, or they may be whispered into the child's ear. In treating a child personally Dr. Worcester tries to become acquainted with the child first, to accustom it to the sound of his voice, to gain its confidence and if possible its affection. In giving suggestions as to undesirable habits, which is the usual object of this treatment, he finds it best to give the suggestion in a twofold form; negative and positive. The first are designed to wean the child's mind from the bad tendency, to paint the habit in such a light as to set the child's will and conscience in opposition to it. Having given the warning he next describes in the most winning language the virtue to be implanted in the child's mind. Among the disorders and habits successfully treated by the means described are morbid fears, bed-wetting, biting the nails, sucking the thumb, sleep walking, self-abuse, stammering, bad dreams, a disposition to lie and steal, violent outbursts of anger, lack of mental concentration, defective memory, lack of confidence and courage, etc.

In conclusion Dr. Worcester says that he does not wish to give the impression that he regards sleeping suggestion as a panacea for the ills of childhood. He regards suggestion of this sort simply as one of the means, not always the most important at the disposal of psychotherapy. The value of the suggestion depends wholly upon its character and upon the character, faith, and intelligence of the person who makes it. The transition is made with little effort, and the improvement is usually permanent.—*The Ladies' Home Journal*, Oct., 1908.

LARYNGOLOGY.

Conducted by

J. E. GLEASON, M. D.

Concerning the Therapy of Tonsillar Abscess.—Contrary to the usual treatment for tonsillar abscess, SOMMER recommends the following procedure. The diagnosis having been established, he immediately does a tonsillotomy either with a curved bistoury or with a tonsillotome. He claims to open the abscess by this procedure almost constantly, when it is often difficult otherwise to locate it, and at the same time prevents later attacks. (?) For local anesthesia he uses a five per cent solution of cocain applied several times, and then injects a syringe full of three per cent cocain with several drops of adrenalin. When there is lockjaw, the result of inflammatory swelling, he opens the mouth slowly in narcosis.—*Munch. med. Woch.*, 53-2.

Nose, Throat, Larynx, and Ear Disturbances in the Course of Kidney Diseases.—SEDZIAK mentions the following nasal conditions as often associated with kidney diseases:—epistaxis, rhinitis and rhinopharyngitis atrophica. Involving the mouth cavity and pharynx are frequently seen bleeding, edema, anemia, pharyngitis sicca, tonsillar abscess, stomatitis, pharyngitis uremica, and glossitis membranacea. In the larynx are observed edema, asthma, aphasia uremica, and laryngitis hemorrhagica. Frequent ear complications are otitis media, acuta simplex and hemorrhagica, otitis necrotica in the middle ear and mastoid, extravasations into the labyrinth, anesthesia acoustica and tinnitus.—*Ref. Archiv. fur Ohrenheil*, 72-1 & 2.

Cricotomy for Removal of Subglottic Laryngeal Papilloma in Small Children, and the Prevention of the Return of the Papilloma by the Internal Use of Arsenic.—When there are symptoms of suffocation, KÖRNER recommends for the complete eradication of subglottic papilloma cricotomy, or if necessary cricotracheotomy as the simplest and best procedure in contradistinction to thyrotomy. The lower edge of the thyroid cartilage is raised with a hook so that there is obtained room enough for inspection and operative attack. For the prevention of the so frequent return, KÖRNER advises arsenic. In adults he begins with one mg., in the form of granules twice daily, increased after two weeks, to three times daily, and continues this treatment for months. With a 3½ year old child, the

author began with one drop of Fowler's solution in water three times daily and gradually increased the dose to three drops three times a day.—*Zeitschrift für Bhrenheilkund*.

Contributions to the Histology and Pathogenesis of Tonsillar Hyperplasia.—LINDT bases his observations on hyperplastic tonsils which had been removed from fifty cases between the age of three and fifty-six years, and on six tonsils removed post mortem from children under one year of age. The assertion of Brieger and others that the histological picture of tonsillar hyperplasia is in general always the same, and that from this alone no conclusions can be drawn concerning the health of the patient nor concerning the cause of the hyperplasia, was verified. Comparisons of the microscopical pictures in the cases of the author according to the general condition of the patients, have not shown substantial differences. The few peculiarities found in debilitated general conditions, like the increased numbers of leucocytes and eosinophile cells, the presence of tuberculosis, offered nothing constant, so that upon these is not dependent the appearance of a certain form of tonsillar hyperplasia. In regard to the method of involution the author agrees with Goerke. The follicle centers offer no prolonged resistance to involution. The parenchyma first gives up its characteristics and then disappears. On the other hand the appearance of squamous epithelium has nothing to do with the involution process as such, since it is only a reaction increasing with years to the harmful influences working from without. Likewise cyst formation in the propria, as well as obliteration, hyaline degeneration and dilatation of vessels are not peculiar to involution but are found in young as well as old tonsils. Concerning the physiology of the tonsils the author agrees with the Goerke-Brieger hypothesis, and opposes Schoneman's view. He views the migration of the lymphocytes through the epithelial covering to the surface only as an expression of the function of the tonsils, and he considers the tonsil therefore as an organ which, differing in structure and function from the ordinary lymph glands, offers a protective contrivance to the mucous membrane of the upper air and digestive tracts.—*Zeitschrift für Ohrenheil*, LV. 1-2.

OTOLOGY.

Conducted by

EMIL AMBERG, M. D.

The Treatment of Acute Middle Ear Suppuration with Nipple-like Perforation by Aspiration of Pus by the Way of the External Auditory Canal.—MUCK says that the acute middle ear suppurations with bulging of the drum-membrane in the upper posterior quadrant are unfavorable for the following reason: There exists a loose net of connective tissue between the long process of the incus, the stapes, the entrance into the antrum and the inner wall of the tympanum and recessus. This network swells up considerably when inflamed, the meshes become saturated with pus "like a very wet sponge" and separate the largest portion of the tympanum from the pneumatic accessory cavities which are mostly simultaneously affected. Hereby a retention of pus occurs in spite of a perforation or paracentesis of the drum-membrane. This pus retention then frequently necessitates the opening of the mastoid process (Kuemmel). An additional factor liable of serious consequences consists of the circumstance that the epidermis of the drum-membrane during the formation of the nipple forces itself into the narrow channel by which procedure the opening is made still smaller, as Katz has shown. It is true that fair results are obtained if the nipple is removed resp. squeezed (Haug). Muck recommends suction of the inflamed tissue of the tympanic cavity with the apparatus advised by him as the more harmless and as he almost says abortive treatment. He observed five cases with pronounced nipple-like perforation of the upper posterior quadrant among one hundred and fifty cases of acute middle ear suppuration. These cases healed on an average after a week when treated by suction. It is necessary to suck intermittently, i. e., repeatedly in one sitting. One sees pus in the canal after the apparatus has been removed. After cleansing the canal each time, one can get five or ten times more pus by suction. One stops when the exudate becomes blood-stained. This treatment is applied daily. After the tympanic cavity is relieved of a part of the exudate, the resorbing factor of the hyperemia produced by suction (Bier-Klapp) shows itself as a curative agency. When an affection of the mastoid process is evident, one cannot be successful any more with this procedure.—*Zeitschrift fuer Ohrenheilkunde, tc.*, Vol. LVI., Part 1.

Clinical Studies in Regard to Surgical Interference in Otogenic Meningitis.—ALEXANDER speaks in his article about the position which the lumbar puncture occupies in meningitis when viewed from a clinically practical standpoint. There exist important modifications regarding the pressure under which the fluid is evacuated. Under normal pressure the fluid flows about in the form of a part of a circle, if the pressure is increased it flows in the shape of a part of an ellipsis in a strong current, if the pressure of the outflow is diminished it flows at an angle to the needle or in drops. A negative result of lumbar puncture can be observed in rare cases. It is a sign of purulent meningitis and of much exudate in the posterior cranial fossa and of an obstruction of the foramen magendi or a sign of meningitis spinalis. In regard to the color of the evacuated fluid the following must be said. Clear yellowish fluid is sometimes found in meningitis tuberculosa; otherwise a white or yellow color with cloudiness speaks almost always for purulent meningitis. The transparency is of greater importance. If the normally clear fluid contains very small white particles or threads it means the presence of meningitis if the clinical symptoms are also present. Yet it must be remembered that considerable cloudiness of the cerebrospinal fluid can be observed if there exist pus foci very near to the intrameningeal space even without traces of inflammatory changes of the meninges themselves which could be demonstrated clinically or by findings post mortem (Koerner, Voss). In regard to the microscopical finding, the infectious purulent meningitis is well characterized by polynuclear leucocytes and microorganisms. Of the greatest diagnostic importance is the appearance of coagulates in the fluid after 3-24 hours (Breuer). It points to meningeal changes especially in those cases in which clear fluid was evacuated and is therefore characteristic for meningitis serosa. It must, however, be observed that the fluid must be protected from any artificial contamination with blood, because this can produce coagulation in a totally normal fluid even if only a very minute quantity is present. Through the lumbar puncture we obtain exact information about the condition of the meninges at the time of operation. The result of the lumbar puncture, however, cannot include a contraindication in regard to surgical interference.—*Archiv. fuer Ohrenheilkunde*, Vol. 76, parts one and two.

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THE INFECTIVE POSSIBILITIES OF COW'S MILK*

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There is no one article of food more important to the human race than milk. In health it is in universal use, and in disease it serves as the basis of dietetic treatment, while in the feeding of infants it is the one essential source of nourishment. The knowledge of the healthfulness of our milk supply is therefore of far reaching importance both to physicians and to the public, and deserves more attention and study than it has formerly received.

Heretofore our laws have required simply that milk should not be adulterated, and that it should contain a certain quantity of food constituents. Our legislators thought that as long as milk had not been skimmed or watered and contained a proper standard of solids and fats, we need not worry about the germs we eat and drink. But we now know that such diseases as scarlet fever, diphtheria, typhoid, cholera infantum, tuberculosis and many other infectious diseases are carried by unclean milk.

Two or three years ago I had a patient who was confined in one of the hospitals five months with fractures of

both legs; he then developed typhoid fever and was seriously ill for five weeks. As the incubative period of typhoid fever is but one or two weeks, it is evident that he must have obtained his infection in the hospital. After the examinations I have recently made of the milk supply in our hospitals, I can readily see from what source he probably obtained his infection. In June of this year, I had a patient who went safely through a mild attack of typhoid. Two days later she was seized with all the symptoms of acute milk poisoning and became desperately ill, and although I took her to the hospital and resorted to every means known to save her life, she died in two weeks, a victim of impure milk.

It has come to be realized that the cleanliness of milk is a hundred fold more important than its food value. While milk poor in fat may mean a certain loss of nutriment to the one using it, its contamination with germs may be a matter of life and death to the consumer, particularly if an infant.

The tender mucous membranes of infants are exceedingly susceptible to the influence of bacteria and their products. Cholera infantum and summer com-

*Read in part before the trustees of the U. B. A. Hospital, Grand Rapids, Sept. 12, '08.

plaints are only other names for acute milk poisoning. Practically all cases of summer diarrhea in babies are caused by impure milk. The wonderful reduction in the death rate of infants in our large cities has been brought about by the recognition of this fact.

The growth of large numbers of germs in milk lessens its food value, because they remove nutriment, and alter the milk chemically. Ordinary market milk, which is overrun with germs, loses much of its value as food after it is 24 or 36 hours old. Practically all the trouble which arises from milk results from its contamination with bacteria.

If milk is heated to a temperature of 150 degrees for 20 minutes most of the germs are destroyed. This process is called pasteurization. Now no known process will make bad milk good milk, and when milk has deteriorated in quality, pasteurization cannot revivify it. Bad milk, whether heated or unheated, is unfit for feeding infants or sick people. But if we *must* depend upon old, contaminated, unclean milk, it is much better, especially in the summer months, to practice pasteurization in spite of its disadvantages. There are, however, certain grave objections to the pasteurization of milk. If it has been kept long before heating, poisons form in it which heat will sometimes not destroy. Milk thus heated is less digestible.

It is also generally accepted that babies will not long thrive as well on pasteurized milk as on clean, unheated milk, and occasionally that they develop malnutrition, anemia and scurvy. Thoroughly pasteurized milk also has a cooked taste, and cream does not rise readily from it, much of the fat remaining in the milk. Another great objection to the pasteurization of milk is that when the requirements for effective pasteurization are not observed, or the milk becomes infected afterwards by careless handling, organisms develop much more rapidly than in

unheated milk; and strange to say such milk may become exceedingly poisonous while retaining its sweet taste and good appearance, owing to the fact that lactic acid organisms, which are usually the cause of the souring, are destroyed by heating. For instance, it has been found that the germs in raw and pasteurized milk containing respectively 1.260 and 12 bacteria, at the end of 72 hours increase to 17,000,000, and 148,000,000 in number. For this reason some authorities believe that pasteurized milk is not fit for consumption after a lapse of 24 hours, while some of the heated milk sold in this city is 72 hours old when used.

A mistake commonly made is in not keeping milk cool enough after it is delivered. If it is kept below 50° F., there is not only not an increase in the number of germs in it, but generally a decrease. The same holds good for milk kept 36 hours below 45°; germs do not usually grow at all below 40°. Freezing does not necessarily destroy them, as, for instance, the germs of typhoid fever have remained alive in ice for three months or over. But this temperature checks their growth, and many kinds are killed by it. Hence milk should always be kept at a temperature of 50° or lower. At a higher temperature the germs multiply rapidly, and the milk quickly sours and deteriorates. Milk containing but 3,000 germs to the cubic centimeter, if kept for 24 hours at 60°, holds 180,000 germs; if at 86°, 1,400,000.

While the mere fact that milk contains large numbers of germs is not a sure proof of unwholesomeness, the estimation of the number of germs in it is the best method we possess for determining its purity and healthfulness. Milk containing few bacteria contains few if any harmful varieties. Some of the market milk of Grand Rapids contains more germs than are usually found in sewage. For instance, the sewage of Boston has been found to contain 2,800,000 germs per c.c.

—that of London 2,000,000—Lawrence, Mass., 3,000,000—Westerville, Ohio, 2,300,000—Marion, Ohio, 239,000.

In an examination of the milk supplied to patients in our hospitals the past summer, I found a condition of affairs that should not long be tolerated. Four samples of milk obtained from one of the hospitals showed 7,650,000, 5,200,000, 15,090,000, and 27,250,000 bacteria respectively in a cubic centimeter (15 drops). The dairyman supplying this institution thought the milk might be contaminated in the hospital, so brought me two samples in sealed pint bottles, which contained 5,550,000 and 6,370,000 bacteria respectively to the c.c. The milk is brought to the hospital in large cans, instead of sealed bottles, which is wrong, and the temperature of the refrigerator is not kept low enough. For instance, a sample showing 5,200,000 bacteria to the c.c. as soon as delivered, contained 15,090,000 at the end of 24 hours in the refrigerator at a temperature of 56°. The ice-box temperature should be 45°—never above 50°. But one sample was obtained at a second hospital, which showed 10,300,000 bacteria to the c.c. To the credit of this institution be it said that all of its milk is obtained in sealed bottles which are kept in a refrigerator until used, there being no intervening ice-boxes on the floors. These boxes are very convenient for the nurses, but unless great care is taken the temperature in them is not kept low enough to check bacterial growth.

Another of the hospitals uses a certain company's pasteurized milk for which it pays 4½ cents a quart. If pasteurization is well done, and the milk properly handled afterwards, the bacterial count should be low. Five samples from this hospital showed the following counts—330,000, 210,000, 50,000, 28,250,000, and 3,870,000. The last sample was taken from a can in the refrigerator, one hour after delivery, temperature of milk, 60°.

A sample of the same milk taken at my residence at the same hour, but delivered in a sealed bottle, showed 380,000 bacteria to the c.c.—showing the advisability of buying milk in bottles rather than cans. The milk with the count of 28,250,000 was obtained from a small ice-box on the second floor where milk is kept in a pitcher for the convenience of the nurses.

Each time milk is removed from the pitcher, it is infected by being stirred up with a spoon to avoid pouring off the cream. I have frequently found the temperature of this box 60° or 65°. One day it contained a piece of ice only five inches in diameter, and the doors were open.

The milk company referred to buys the most of its milk from a large number of producers scattered about the country, and does a large wholesale and retail business. After being passed through a separator to remove coarse particles of dirt, manure, insects, hairs, etc., the milk is heated momentarily to a temperature of 155° and cooled instantly to 37°. This is supposed to "pasteurize" it; but exposure to a temperature of 155° for such a short time is not sufficient to destroy all of the bacteria with which such milk is teeming. This is shown by the following report of Dr. M. J. Rosenau, director of the Hygienic Laboratory, Public Health and Marine Hospital Service, Washington, D. C., as contained in Bulletin 41:

Colonies per c.c.

BEFORE PASTEURIZATION.	AFTER PASTEURIZATION.
92,000	2,200
142,000	6,000
71,000	6,000
93,000	6,900
105,000	38,000
1,680,000	80,000
380,000	83,000
214,000	87,000
6,700	28,200

900,000	100,000
7,000,000	70,000
74,000	35,000

These milks were heated to a temperature of 163° to 165°.

The same variable results are to be observed in the samples taken from our hospital, and show the inefficiency and unreliability of the Flash Pasteurizer used. Milk to be thoroughly pasteurized should be heated to from 140° to 150° F., and maintained at that temperature for 20 minutes.

The beneficial results following efficient pasteurization have recently been shown in a striking and conclusive manner by Mr. Nathan Straus in Sandhausen, a village of 4,000 inhabitants in South Germany. "The death rate among children was very high there, and Mr. Straus was satisfied that this was due to the quality of the milk supply. He therefore made arrangements to pasteurize all the milk supplied to the inhabitants of the village. The experiment began on January 1, and the results have been most encouraging. In the first seven months of 1907 thirty children under one year of age died. In the first seven months of the present year, during which they have been supplied with pasteurized milk, only nine children died," a saving of twenty-one lives.

In a paper read before the International Congress on Tuberculosis in Washington September 30th, Dr. Alfred F. Hess, of New York, stated that of eight samples of commercially pasteurized milk recently examined by him, one was found to contain virulent "tubercle bacilli"—another illustration of the fact that "so-called commercial pasteurization cannot be relied upon for protection." Dr. David Bovaird, Jr., of New York, also read a paper calling attention to the fact that abdominal tuberculosis is much more frequent in Great Britain than in the United States,

and attributed this to the corresponding preponderance of tuberculosis in the former country. An examination of the milk supply of Washington, D. C., last year showed that the milk from 11 per cent of the dairies supplying that city contained tubercle bacilli. Other investigations in recent years have shown that 5.2 to 55 per cent of the market milks in various parts of the world contain tubercle bacilli.

A. V. Melvin, D. V. S., chief of the United States Bureau of Animal Industry, Washington, D. C., in another interesting address stated that from a review of the statistics of the U. S. Federal Meat Inspection for the fiscal year ending June 30, 1908, covering 53,973,337 animals, or more than one-half of all those slaughtered for food in this country, and from the reports of tuberculin tests made in the fifteen years from 1893 to 1908, by federal, state and other officers on 400,000 cattle (mostly dairy cattle), it is concluded that 10% of the milch cows in the United States are affected with tuberculosis. As it is now generally admitted by scientists that tuberculosis in cattle is communicable to man and in particular to children, and as many cases of consumption in the adult are without question due to infection in childhood, it should be recognized by all sanitary authorities that the sale of milk from cows which have not been tuberculin tested or milk which has not been properly pasteurized, is a great menace to the public health, and should not be permitted.

The milk company supplying so-called pasteurized milk in this city also buys the output of a dairyman whose methods are much cleaner than the average farmer in the vicinity of Grand Rapids. This consists of about 50 gallons a day, for which the company pays four cents a quart. This milk is not subjected to heat. Forty gallons are bottled and sold for eight cents a quart. The other ten gallons are bottled, sealed with caps bearing the inscription, "Certified milk for the

nursery," and sold for 12 cents a quart. The milk is not "certified." Twelve samples examined by Dr. Wm. H. Veenboer, bacteriologist of the Milk Commission of the Kent County Medical Society, the past summer contained from 79,000 to 379,000 bacteria per cubic centimeter, the average being 203,000. The cows have not been tested with tuberculin.

This same milk company advertises to represent the Walker Gordon Laboratory in Grand Rapids. Such, however, is not the case, its license having been cancelled three years ago after a personal inspection of the company's methods by a representative of the Walker Gordon Co., since which time it has had absolutely no connection with the Walker-Gordon Co.

It must not be supposed that the milk supply of our hospitals is any more contaminated than that of the city at large. A sample of milk obtained at a prominent hotel was found to contain 6,320,000 bacteria to the c.c.—one from another hotel 3,290,000—one from a leading restaurant 10,300,000, etc.

Parks, one of our great authorities, says that milk containing over 50,000 to 100,000 bacteria per c.c. in 24 to 36 hours, should not be sold, and that any intelligent farmer can use sufficient cleanliness and apply sufficient cold, with almost no increase in expense, to supply such a product. Bitter, an authority on sanitary milk, maintains that the maximum limit for milk that is fit for use is 50,000 germs per c.c.

Recognizing the fact that a pure supply of milk for the city was desirable, the Kent County Medical Society last fall appointed a milk commission which after considerable labor succeeded in inducing a dairyman to produce certified milk. It was put on the market July 1st. Counts are made once or twice each week by our bacteriologist, Dr. Wm. H. Veenboer, and the maximum limit of 10,000 germs per c.c. permitted by the regulations

of the commission has not yet been reached.

What then shall be done in Grand Rapids to secure a clean, healthful supply of milk? First—Every cow supplying milk to this city should be tuberculin tested and proven to be free from tuberculosis. The last session of the legislature passed a law empowering the Board of Health to make these examinations, and between 500 and 600 of the 4,000 cows whose milk is used in this city have undergone the tuberculin test. Second, The common council should aim to establish a legal standard for the bacteriological content of milk, which would have a much more important bearing upon the public health than our present chemical standards. This has been done already in several cities, Boston having a standard of 500,000 bacteria to the c.c., and Rochester 100,000. Milk not reaching the legal standard should be pasteurized, and this should be done under the immediate and constant supervision of the health officer. The ordinary tests for fat, total solids and specific gravity are valuable, but affect principally the pocketbook. The healthfulness of the milk is not revealed by these tests.

Miss Louisa T. Blackburn of the bacteriological laboratory of the N. Y. City Board of Health, who made these counts for me, examined three samples of certified milk and found 1,800 bacteria per c.c. in the first, 200 in the second, and 500 in the third which was 36 hours old at the time. When we have such milk at our disposal, which does not need heating, we have no moral right to feed invalids in any of our hospitals such milk as they are receiving today.

Twenty-five per cent of the total daily milk supplied to the city of New York is pasteurized, and about one-third of Boston's supply. In Berlin, Paris, and many other European cities much of the milk is now pasteurized.

Third—The public must be educated.

When people recognize the fact that pure clean milk cannot be produced for six cents a quart, and demand a wholesome quality, even if eight or ten cents must be paid for it, it will be forthcoming on the part of a good many dairy-men, instead of being confined to one, as at present.

Legislation alone cannot give a municipality good milk. Quality and cleanliness must to a great extent regulate its price, and the incessant care and attention necessary for the production of clean milk must be paid for. People would be more ready to do this, I think, if they realized more clearly its great food value, and that all things considered milk is one of the most economical of all foods. For instance, one quart of fresh milk is equal in food value, approximately, to one pound of fresh lean loin of beef (the retail price of which is 15 cents), three-fourths of a pound of lean round steak (12 cents), one pound of veal (16 to 22 cents), one pound of sweetsbreads (35 to 50 cents), three-fourths of a pound of dried beef (24 cents), three pounds of fresh solid oysters (75 cents), eight large or nine small eggs (18 cents), sixteen quarts of beef broth, four quarts of beef juice, or seven quarts of cereal water (oatmeal, barley or rice). Few people realize the insignificant food value of beef tea or beef broth, however made.

The cost of milk diet to a hospital is considerably less than any other diet.

I do not know the cost of food per patient per day in your hospital, but the

most economical as well as the most scientifically constructed dietary at present used in this country is probably that of the annex to the Loomis Sanitarium, at Liberty, N. Y. After an exhaustive study of the nutritive properties of all sorts of foods as expressed by calories, the universally recognized unit of measure of food values, and knowing the proper amounts of proteids, fats and carbohydrates necessary to adequately nourish an individual, Dr. Herbert M. King, physician in charge, has arranged a dietary which in its essential requirements is much superior to that formerly used and which has reduced the cost of raw food from 38 or 40 cents per patient per day to 26 or 27 cents per day. When it is considered that the cost of food per patient in an institution is always doubled and sometimes trebled by the expense of cooking and serving it (the waste alone of digestible and assimilable food in the kitchen and dining-room amounting to from 15% to 50%), and that few patients on a milk diet take more than two quarts a day (a very few may take three quarts), the economy of milk, which is usually consumed raw, as an article of food must be apparent.

There are more grades or qualities of milk on the market today than of eggs or meat; and if you are careful to buy only fresh eggs and fresh, tender meats for your patients, why not exercise equal care and discrimination in buying your milk?

DIET IN GYNECOLOGY

J. H. KELLOGG, M. D.,

Superintendent of the Battle Creek Sanitarium.

No class of specialists in medicine and surgery have more assiduously or more fruitfully cultivated the special field allotted them than have gynecologists, and in no specialty has there been greater progress and development than in this. Every other branch of scientific medicine has contributed something either to the etiology, the pathology, or the therapeutics of gynecology. The facts contributed by bacteriology and the radical aid rendered by abdominal surgery have saved, not thousands only, but in the aggregate, millions of women. It is barely possible, however, that the contemplation of the brilliant triumphs of surgery and the riddle-solving discoveries of bacteriology as related to the diseases of women may have to a certain degree eclipsed some of the less sensational although perhaps equally useful advances which have been made in other departments.

It is the aim of this paper to point out some of the lessons which may be gathered from the more recent progress in dietetics and to show that not a small proportion of the distressing symptoms and special ailments from which women suffer and with which the gynecologist is called upon to deal are not the result of any essential disorder of the organs peculiar to women, but are due instead to a faulty regimen; and that these symptoms and ailments may be relieved and removed by proper regulation of the

dietary and of the nutritive functions.

The classes of disorders with which the paper will especially deal are:

1. Those in which the patients recite the usual category of distressing symptoms in the region of the pelvis—those of pain, backache, sideache, legache, dragging sensations, etc., but in which careful examination reveals no physical evidence of disease of the pelvic organs.

2. Those in which physical evidence of disease co-exists with the various subjective symptoms relating to the pelvic region, such as endometritis, parametritis, leucorrhea, displacements of the uterus or ovaries, acute and chronic infections of the Fallopian tubes, etc.

3. Cases in which the patients present various remote or general symptoms which are usually attributed to the reflex influence of morbid conditions of pelvic viscera such as prolapse of the uterus or ovaries, retroversion, laceration of the cervix, endometritis, ovaritis with erosion of the cervix, etc., with or without local subjective symptoms.

Every gynecologist has encountered many illustrations of the first class of cases in which without any physical evidence whatever of pelvic disease, the patient complains bitterly of symptoms which are commonly attributed to disorder of the pelvic viscera. Such patients are often very hard to convince that no local disease exists, and that no local treatment is required. Not infre-

quently the patients become possessed of the idea that a surgical operation is required, that the uterus or the ovaries must be removed, the cervix or perineum operated upon, a curettage performed, or some operation done which is supposed to be the means by which some friend found relief from similar symptoms. Not infrequently such patients have for years drifted about from one gynecologist to another, finding, now and then, temporary relief through suggestion, but always drifting back into worse conditions. If the gynecologists refuse to operate or to administer local treatment, the patient usually sets out in search for some physician who will accept her theory and institute a course of treatment in harmony therewith.

The motives which lead a gynecologist to meet the wishes of such a case are not necessarily commercial, though they may be. There may, indeed, be a sincere purpose to lead the patient to recovery through suggestion, though the means adopted can not be considered wise or scientific; or the motives may be mixed. In any case such a patient usually finds some one who is willing to administer the treatment she desires, and so she goes on year after year, constantly in the hands of one specialist or another until perhaps she finally reaches the climacteric. Then she is told her troubles are due to the change of life and is assured that when the change is completed she will be relieved. Unfortunately, however, in this she is disappointed. Cessation of the menstrual period brings no relief. The symptoms even become more aggravated as senility appears. In the early years of my practice I was not a little puzzled with these cases, and it was not until after I noted that many of the symptoms of which patients of this class complain were identical with the symptoms mentioned by certain classes of men patients, that I began to appreciate that I

must look elsewhere for the cause. The writings of Glenard, Levin, Dujardin-Beaumetz and other French authorities opened my eyes to the great and widespread influence of the abdominal sympathetic and especially to the three great sympathetic centers, the right, left, and sub-umbilical ganglia.

In recent years Mayo Robson and Moynihan have called attention to referred pain and tenderness in the back as a symptom of gall-bladder disease. This is a reflex in which the initial irritation is experienced by the sympathetic nerves and transmitted through the sympathetic centers to the sensory nerves of the cerebro-spinal system. This effect may be produced no matter what centers are irritated, no matter what the source of the irritation, whether an inflammatory condition in a viscus or the circulation of irritating toxins in the blood. The umbilical ganglia are to an extraordinary degree exposed to irritations of both sorts. Branches of sympathetic nerves from these ganglia are distributed to the colon and small intestine and other abdominal viscera as well as to the pelvic organs; hence the ganglia may be irritated by morbid states of the intestine, especially the colon, as well as morbid conditions of the pelvic viscera. This explains the fact that a woman may have many of the subjective symptoms which accompany a non-inflammatory disease of the pelvic organs with no lesion of these organs of any sort. In cases of the sort under consideration, the hypersensitive and irritated condition of the abdominal sympathetic may always be demonstrated by making deep pressure about two inches on either side of the umbilicus and the same distance below it. The patient lies upon the back with the knees flexed, the abdominal muscles relaxed, while the pressure is directed toward the spinal column. An elliptical sensitive spot about two inches in length and three-quarters of an inch

in width may be easily located on either side of the umbilicus, and about two inches below it. Not infrequently when pressure is made upon one of the umbilical ganglia, the patient will experience a pain in the back, the groin, or the leg, and immediately recognize a familiar symptom. In my experience it is a common thing for the patient to exclaim, "Why, doctor, that is the very pain from which I suffer so much." The fact that the pain has been located and reproduced is often a good foundation upon which to build confidence on the part of the patient that the cause may be removed, and the cause is the thing in which the intelligent and practical physician as well as the intelligent patient will be interested.

The treatment of symptoms is necessary and rational, but to confine one's therapeutic endeavor to the treatment of symptoms alone is rank empiricism and is irrational; hence the importance of searching thoroughly for the cause of the sympathetic nerve irritation which is the real source of most of the subjective symptoms from which these patients suffer.

These causes are numerous. Among the most frequent of these causes of sympathetic irritation is enteroptosis. A prolapsed and pendant condition of the bowels, especially the colon, puts the sympathetic nerves which reach the bowels through the mesentery upon a stretch, causing a painful tension which is especially pronounced whenever the patient assumes a perpendicular position. This prolapsed condition of the intestines and of other viscera which are usually associated in the prolapse is a natural result of conditions to which the average civilized woman is subjected. The sedentary life, especially the sitting position, and rocking-chair sitting in particular, results in a weakened and atonic condition of the abdominal walls so that the natural support of the ab-

dominal organs is lost. In the majority of adult women, the abdominal walls are flaccid, wholly lacking in tone, and the lower abdomen bulging, and the colon and other viscera lying at levels from two to seven inches below the normal. Lack of exercise contributes to this muscular weakness as does also the unnatural mode of dress to which civilized women subject themselves, particularly in the wearing of rigid corsets and tight waistbands.

Careful determination of the position of the viscera in several thousand women has fully convinced me that enteroptosis exists in at least nineteen twentieths of all women who consult the gynecologist. The more recent methods of locating the viscera, particularly the location of the colon and the stomach by means of the Roentgen ray and bismuth fully confirm the earlier observations which I made and the results of which I have reported in various papers read before this society and the American Medical Association.

For the demonstration of enteroptosis the examination of the patient must be made in the standing position. In this position it is easy to demonstrate the prolapsed condition of the stomach by causing the patient to lift the prolapsed organ back into position by raising the chest and contracting the abdominal muscles. The stomach may be seen to be carried upward by this maneuver from two to seven inches. These patients have often themselves recognized the cause of their suffering, and not infrequently remark, "Doctor, whenever I am on my feet I have such a dragging sensation across the lower abdomen that I feel as though I must hold myself up." The application of a proper abdominal supporter in these cases not only affords the patient grateful relief, but demonstrates the source of the patient's suffering to be the cause above referred to.

There are other causes of enteroptosis

than bad pressure in sitting, incorrect dress, and the deficient development of the abdominal muscles. Certainly one of the most common of all causes is chronic constipation. Foodstuffs normally require seven hours in passing from the stomach to the colon. The digested food products remain for fourteen hours in the cecum and ascending colon. An additional three hours is required to complete the transit of the alimentary canal. When the daily discharge of undigested food remnants and intestinal excretory products is omitted, there is an excessive accumulation in the colon. The overloading begins in the cecum. There is an abnormal drag upon the hepatic flexure of the colon which at first gives rise to backaches, sideaches, and later results in displacements of the right flexure, and through the connection of the colon with the kidney the latter organ is also dragged out of place and becomes movable or even floating. The retained fecal matters give rise to fermentation which likewise distends the colon in all directions. It is not only enlarged in its transverse diameter, but it is elongated. The elongation of the transverse colon leads to the prolapse of this part of the bowel without necessarily loosening the bowel at its hepatic and splenic flexures.

In operations requiring abdominal section, I have often found the transverse colon lying very low in the pelvis. A loop is often formed in the sigmoid portion of the colon. All of these distended portions of the bowel, when filled with fecal matter, as is almost universally the case in chronic constipation, drag upon the umbilical ganglia of the sympathetic and thus become a prolific source of referred pains which lead the patient to believe that she is suffering from pelvic disease, and too often mislead the practitioner in the same direction.

For nearly twenty years I have made

it my practice to begin my examination of every case supposed to be suffering from chronic pelvic disease by careful location of the upper abdominal viscera and examination of the abdominal muscles and the abdominal sympathetic. My statistics show that static disturbance of the abdominal viscera can be demonstrated in nearly all cases of chronic pelvic disorder, with the partial exception of cases resulting from the sequellæ of acute pelvic inflammations.

Indigestion in its varied forms, and the causes of these disorders as well as those above mentioned, must receive due consideration if these cases are to be benefited by our therapeutic efforts. Dietetic regulation in cases of this sort is a measure of first importance. The patient must be instructed to masticate thoroughly each morsel of food. Half-baked bread, mushes and imperfectly cooked cereals of all kinds which form hard, irritating masses in the bowel and are a prolific source of intestinal mischief, must be prohibited. A high protein or rich meat diet must also be prohibited. An abundance of fresh fruits and fresh green vegetables is of great importance, not only in regulating the bowels but as a means of opposing putrefactive processes in the intestine.

In cases of the second class, in which physical evidences of pelvic disease co-exist with subjective symptoms, nutritive disorders are often a dominant factor through the lowered vital resistance which necessarily co-exists with both metabolic and intestinal autointoxications. Saturation of the system with the imperfectly oxidised products of proteid metabolism produces a condition of lowered resistance which opens the door to the invasion of infective micro-organisms of various sorts.

Every physician knows the importance of withholding flesh foods in the presence of acute infections of all sorts. This fact is based upon the unequivocal teach-

ing of experience. Roger has recently made a list of nearly eighty pathogenic organisms which have been found growing in the small intestine. All of these are invading parasitic bacteria. The normal flora of the intestine consists exclusively of harmless, acid-forming bacteria which act in a protective way by occupying the field and rendering the intestinal fluids inhospitable to the pathogenic, toxin-forming organisms. A high protein diet, as has been pointed out, encourages the growth of these organisms as evidenced by the putrid stools of the carnivorous animal and the user of large quantities of meat. In a patient whose colon is habitually laden with putrefactive material, the susceptibility to infection by pus-forming and other organisms is greatly increased, and at the same time the bowel itself is an incubating chamber in which various pus-forming organisms are developed in vast numbers. It has been demonstrated by various investigators that these organisms are constantly passing through the intestinal walls in great numbers. It is only because a constant battle is waged against these invading organisms by the leucocytes of that great lymph sac, the peritoneal cavity, and by the omentum, that peritonitis, salpingitis and other infections are averted. It is only necessary, however, that the virulence of the invading organisms should be increased or that the resistance of the body should be still further reduced to initiate an active infective process which may develop into a peritonitis, a salpingitis, a parametritis, an endometritis or some other acute inflammatory process. Or, instead, a gradual lowering of the vital resistance may lead to a gradual infection of the genital tract by micro-organisms resulting in a vaginal or cervical catarrh, and chronic endometritis, or a catarrhal inflammation of the Fallopian tubes. These conditions are not, in the writer's opinion, the result of accidental

infections, but are due to the gradual lessening of the resistance of the tissues through the long continued action of erroneous habits of life, chiefly dietetic errors of the sort referred to.

It is almost a routine practice with many an experienced physician to begin the treatment of these cases by what was formerly termed an "opening purge" such as a dose of salts or calomel, or the two in combination, to unload the portal circulation. The rationality of this practice was not good, but the results were usually excellent. Calomel and salts do not unload the portal circulation, but they do unload the bowels. Calomel is a very effective intestinal antiseptic, and saline laxatives clear the intestines of undigested masses of decomposing flesh and billions of virulent bacteria, thus rendering the body material aid in its battle against invading bacterial and paralyzing poisons.

The third class of cases, in which there may be local physical symptoms such as uterine or ovarian displacements, cervical or perineal tears, etc., without local or subjective symptoms but with co-existing remote or general morbid conditions such as headache, nervousness, emaciation, pigmentation of the skin, neurasthenia, etc., affords opportunity for the greatest triumphs in the application of the principles of modern medical dietetics. At the same time, this is a class of disorders in which, in the writer's opinion, there is more unnecessary gynecological practice, and especially unnecessary gynecological surgery, than in any other. The teaching of Emmett and others of his school which attributed to slight cervical and perineal tears, small or large cicatrices in these regions, and like lesions, such disorders as those referred to, has in the writer's opinion little foundation in fact. Those who promulgated these views were led astray by their ignorance

of the real causes of the symptoms and conditions referred to.

These patients are not infrequently relieved by operations upon the cervix or perineum, but the relief is not due to the removal of the lesion supposed to be the etiological factor in the case, but rather to the rest in bed, the salutary clearing out of the alimentary canal, the withholding of flesh foods from the dietary, and sometimes doubtless to the potent influence of suggestion. Even greater benefits might have been obtained in many cases treated thus surgically, by purgation, dieting, rest, etc., without the surgical procedure.

It is certainly a serious mistake to subject a woman to the hazard of a gynecological operation, light though it may be, and the accompanying pain and inconvenience, when relief can be obtained by other means; especially as the relief obtained by operation, in cases of the class referred to, is rarely more than temporary. The real cause in the great majority of cases is chronic intestinal auto-intoxication. This is clearly shown by the coated tongue, bad breath, and especially by the presence of quite large quantities of indol and putrefactive bacteria in the feces and of indican in the urine. In not a few of these cases there is present substantial evidence of an infected state of the colon in the discharge of great quantities of mucus.

Many cases of so-called pseudo-membranous enteritis or colitis are found in this class of patients, and the mistake is sometimes made of attributing the bowel disorder to some perverse reflex from a torn cervix or perineum. Bad cervical tears accompanied by endometritis and erosions are proper subjects for operation, but the custom still prevalent with some surgeons of operating on every slight (old) tear of the perineum or cervix is certainly unnecessary and most reprehensible.

Having demonstrated the inadequacy

of gynecological operations for the relief of these cases, and recognizing the intestinal toxemia as a prominent factor, an eminent London surgeon has devised and enthusiastically advocates the radical procedure of removing the greater part of the colon. Fortunately, the magnitude of this operation, and the death-rate until the present time, are such as to deter many surgeons from following the illustrious example of the surgeon referred to. In the writer's opinion, the good results obtained by Dr. Lane may be secured by the adoption of thoroughgoing antitoxic dietary and other non-surgical measures of treatment.

The dietetic treatment of the three classes of cases mentioned is essentially the same. It is most essential to place the patient upon an antitoxic dietary and regimen. The bill of fare must be balanced, and care taken to reduce the protein to the lowest limit which will satisfy the body needs. The proportion of proteins should be not more than ten per cent of the total number of calories in the daily ration. Meats must be used very sparingly indeed, and it is much better to discard them entirely. There is no difficulty in doing this when proper care is taken to supply the patient with a varied and properly proportioned bill of fare. Animal fats must be used sparingly, as Combe and others have shown that they encourage toxic conditions of the intestine. Fruits, fresh vegetables, well-cooked whole grain cereals, must constitute the main features of the diet. The yolks of eggs may be used sparingly, but the whites of eggs, especially when hard boiled, should be discarded as they are never sufficiently masticated. Food must be thoroughly masticated so as to avoid excessive delay in the stomach and to lessen the amount of undigested and putrescible residue. Food should be sufficiently bulky to stimulate active peristalsis. The bowels should move twice daily. The use of buttermilk, or of Bul-

garian milk preparations made from maya, the ferment used in the preparation of yabworth, is especially to be recommended. When the milk preparation can not be obtained, the ferment may be used instead, prepared in the form of a dry powder in capsules or tablets prepared as suggested by Metchnikoff. Lactic acid-forming ferments are all very serviceable in these cases by creating an acid condition of the intestinal fluids which hinders the growth and development of the putrefactive anaerobes.

It is well, at least in the beginning of treatment, to empty the colon by enema two or three times a week to make sure that there is no stasis in this part of the intestine. Thorough-going antitoxic measures should be instituted until the stools are no longer putrid. Great advantage may be obtained by the bacteriological and chemical examination of the feces and the estimation of indican in the urine. It is most satisfactory to see the rapid decline in the number of putrefactive bacteria and in the quantity of indol and other putrefaction products in the feces as well as of the amount of indican in the urine under the influence of an antitoxic diet.

The experiments of Combe show that rice prepared in the ordinary way, is the most antitoxic of all the cereals. Malted cereals are, according to Combe, also highly antitoxic. The same is true of fruits, especially of sweet fruits, which encourage the growth of the friendly, lactic acid-forming ferments. Animal fats encourage the development of toxins. Vegetable fats are, on this account, much preferable. Under the influence of such a dietary, the pigmentation dis-

appears from the skin, the patient gains in weight, headaches disappear, the tongue clears, the breath becomes sweet, the perspiration is no longer malodorous, the stools lose their putrid character, the indol and indican diminish, and finally disappear from the feces, and the urine; nervous symptoms which have resisted all sorts of medicinal remedies likewise disappear, and often in a few weeks or months, as the case may require, complete recovery occurs in cases in which a variety of severe and sometimes very hazardous surgical procedures have been urgently advised. It is the writer's opinion that regulation of the bowels and the digestive and nutritive functions by proper regulation of the diet and treatment addressed to these functions are matters of primary importance in the treatment of gynecological cases, and that whatever other measures may be adopted, these should never be omitted.

It is not, of course, the purpose of this paper to decry necessary or justifiable treatment, either medical or surgical, but rather to urge the more assiduous and exact application of non-surgical means so far as they may be found to be applicable; and it is hoped that some of the measures suggested may be considered worthy of consideration and trial.

If time and space permitted I should be glad to append the brief notes of a number of cases which illustrate the points made in this paper. I will omit the reading of these reports, however, only remarking that they, with notes of other similar cases which I might adduce, fully justify and substantiate the statements above made.

NEGLECTED FIELDS IN MEDICINE

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As the science and art of medicine have developed there have come into prominence at different periods, various theories, born of dissatisfaction, nourished by superstition, living as a rebuke to the existing conditions, dying perhaps, but leaving their imprint upon the thought and practice of our art.

About sixty-five years ago, Doctor Oliver Wendell Holmes, in a public lecture delivered before the Boston Society for the Diffusion of Useful Knowledge, considered some of the medical delusions which illustrate the childlike credulity of mankind, on subjects pertaining to medicine. His study of the theories and the practice of the homeopathic sect is an interesting analysis of the fallacies of that school. Time has undoubtedly softened the feeling towards homeopathic ideas, but more than a hundred years of scientific investigation have failed to prove a single one of their so-called laws. There are today very few in that school that have much faith in Hahneman's theories, if we are to judge from their practice.

Christian science and osteopathy are two sects, which have sprung into existence within recent years, whose extravagant claims for their healing powers far exceed the truth. There are other systems of practice, which can hardly be called schools, that have many votaries: such as, vegetarianism, hydrotherapy, electrotherapy, massage, exercise, the various forms of light treatment and

many others. The enthusiastic follower sees in each an almost universal panacea for human ills, while the regular physician too often sneers at their claims and results. We all realize that the most unreasonable and fantastic theories have their devotees, and that some are always ready to testify to the value of any method.

While these side-lines of medicine are too often in the hands of ignorant and unprincipled practitioners, we must admit that they succeed, many times, where others fail. If the regular profession were as alert and as intelligent as they should be, these practitioners of exclusive systems would find little to do. We might almost say that "quackery" thrives on the indifference and ignorance of the profession. Much as we condemn the extravagant claims made for these medical dogmas, we must admit that each has contributed a grain and in some instances many grains, to our stock of knowledge. It is for our interest to appropriate anything of value which these systems possess, and to ascertain why we fail when others succeed.

Homeopathy was a rebuke against the crude and severe practices of the older school. The frequent bleeding, and the large doses of nauseating and powerful drugs did positive harm. Homeopathy taught us to respect the reparative processes of nature.

Christian science is the gospel of cheerfulness and of hope. Though we

condemn its practices, we must admit that many an irritable, nervous, and pessimistic individual has had his whole life changed for the better by this simple and optimistic doctrine. The large following which this sect has depends upon a belief in the powerful influence of the mind over the body.

The use of mental therapeutics is not new. The pagans and semi-civilized tribes have invoked for centuries the aid of their deities in the healing of the sick. Many Catholics today visit the shrines of the saints to find relief from physical infirmities. We all realize that many functional nervous diseases are the result of the individual being out of harmony with his social surroundings. The strenuous life, business and family cares, social duties and religious impulses are some of the causes that produce worry, nervous breakdown and mental disease, in those with ill-balanced nervous systems. These nervous conditions usually interfere with nutrition, and predispose, at least, to bodily disease.

Such nervous patients need advice, not medicine. We should attempt to change the whole tenor of their thoughts by suggesting new avenues of mental activity, by making them worry less over family or business difficulties, by interesting them in some out-of-door game, by encouraging a hobby that brings pleasure and recreation; thus perhaps the whole attitude of the patient toward life may be changed, and his bodily functions improved. Recently in Boston, and then in other cities, a serious attempt has been made to offer the services of religion as an aid to the physician, in the relief of certain functional diseases.

We need to bring more of this scientific spirit into our medical work. By the scientific spirit as applied to medicine, I do not mean that all of our patients are to be studied and treated by the rigorous laws and methods commonly

employed by the laboratory worker, but by close observation and the application of well known facts, we should do less guessing and base our opinions upon knowledge.

The greatest advances in medicine, during the last quarter of a century, have been along lines of prophylaxis and etiology. The fundamental principles of medicine are to be found in the study of anatomy, physiology, chemistry and pathology; still but a small proportion of our profession systematically study these branches after graduation. The advances in physiology, for instance, during the last two decades have been such as to modify greatly our views, yet the library of a physician in practice twenty-five years seldom contains a physiology of recent date. It is the same with the other fundamental branches.

Advice upon the broad principles of hygiene is commonly overlooked by the physician. When I was in general practice, and especially when I was intubating city cases, I often noted the prevalence of throat affections in the homes situated upon unpaved streets, and in houses without a foundation. The same is true of clinic cases. It has been found that the infectious diseases, including tuberculosis, are more common among those living upon unpaved streets, and in the midst of unsanitary surroundings. I have often observed chronic sore throats, or frequent acute attacks, in several members of the same family, which seemed to be dependent upon the condition of their homes. Investigation would often show water standing under the house, putrid with organic matter. Adenoids removed from children of the poorer classes more often recur than in those children who live under better hygienic conditions. Individuals living under unsanitary conditions are often below par, although no definite disease is discernible. Physicians can do a great deal

to lessen the danger of disease by advice regarding sanitation. Simple practical instruction can be given that will frequently enable a householder, at a very little expense, to make his home healthful. The co-operation of the health officer will often bring results where we alone would fail.

The proper heating and the ventilation of houses is too often neglected. I doubt if attention enough has been given to the injurious effects of breathing baked air. We know the value of fresh foods and fresh water, as compared with cooked foods and boiled water. We also know that sterilized, and even Pasteurized milk, is not as wholesome as pure, fresh milk. Is it not reasonable to believe that the baking of air over the hot drum of a furnace, or coils of steam pipes, may take the vitality out of the air, thus lessening its value for respiratory purposes? The average house is over-heated and poorly ventilated.

This brings us to a consideration of the value of fresh air, sunlight and the advantages of different climates in the prevention and the treatment of disease. The open air treatment of tuberculosis has done much to educate the public and medical profession to the value of living out of doors. We would do well to advise the healthy, as well as the sick, to follow such a life.

It is a pity that physicians have not more definite ideas about the climatic treatment of disease. Either through thoughtlessness, or ignorance, many a tubercular patient is sent west, by his physician, only to find conditions very much worse than at home. For the average patient the difficulty of obtaining proper food, wholesome water and congenial surroundings, at a reasonable cost, more than counterbalance any advantage which the climate can offer.

The composition of the atmosphere in all parts of the world is essentially the same. The varying factors in the air of

different localities are the amount of dust, both organic and inorganic; the amount of moisture, that is, the humidity; and the rarity of the atmosphere, which is in direct proportion to the altitude. Besides these factors we have to consider the amount of sunshine, the temperature and the prevailing winds. A climate that allows a patient to be outside most of the time has an advantage over one that makes this unpleasant, but crude, or unhygienic surroundings, may outweigh this factor. The treatment of tuberculosis has demonstrated that an out of door life in this section is beneficial, and that it is not necessary to send a patient to another climate for pure air and the stimulating effects of oxygen. We forget that the benefit which seems to result from a change of climate is due often to a change of habits, and that if a patient could be induced to pursue a more sane method of life at home, by spending practically all of his time in the open air, he would receive the same benefit that a change of climate gives. The value of fresh air applies not only to chronic diseases, but to acute medical and surgical cases as well. Perhaps the greatest advance in the treatment of pneumonia, in recent years, has been an appreciation of the value of placing the patient in the fresh air. The temperature and restlessness are lessened, the breathing made slower and deeper, and a general improvement results. It is said that surgical cases do much better if the convalescence takes place in the open air.

Another neglected field is the matter of diet. Every patient with an acute disease, and the majority of chronic cases, ought to have a diet outlined. It is not sufficient to say, "Take a soft diet," or "Eat foods that are easily digested." We should be more specific. In order to give definite advice, we should have a clear idea what is the relative worth of the principal foods,

both from the standpoint of the nutritive value and the ease of digestion. The observations of Chittenden as summed up in his work, "The Nutrition of Man," have changed somewhat our ideas as to the amount of proteid necessary for an average individual. Perhaps it is too early to accept all of his conclusions, but we have known for a long time that the average American eats too much. If experience proves that we do not need as much proteid as was formerly thought necessary, it will be a great advance, both from the standpoint of health and economy.

We are indebted to a layman, Fletcher, for telling us what we knew in a general way, that the slow and thorough mastication of food greatly adds to the ease of digestion and assimilation, and at the same time makes comparatively tasteless foods palatable. His individual experience has been that with a smaller quantity of food, thoroughly masticated, he has increased his endurance for physical and mental work to a remarkable degree. All this has been done without systematic training, and on no special diet. He eats what he wants, when he feels hungry, and all he wishes, observing only the rule, to eat slowly and to masticate thoroughly his food. His observations on himself have been confirmed by a number of capable physiologists. It is possible that Fletcher from his own personal experience has drawn too sweeping conclusions. Experiments carried on at Yale, and other universities, have shown however that his statements are in a general way true.

Hydro-therapy has a well recognized place in the treatment of disease, yet seldom is it seriously considered by the average physician. The tonic effect of a morning cold bath, or spongings, is an important prophylactic measure against colds. Tired and aching limbs are refreshed by a warm bath. Insomnia is sometimes relieved by a warm bath, fol-

lowed by a cold douche down the spine. The safest and most reliable measure for the reduction of fever is the use of the cold bath, pack, or spongings. It should replace the use of the dangerous coal-tar antipyretics in nearly every instance. In chronic rheumatism, alcoholism, obesity, or in any condition where elimination is desirable baths are of value. They have a place in the treatment of nervous and mental diseases to such an extent that private and public institutions are equipped with the necessary apparatus for the skillful application of the various forms of baths.

The electric and mud baths, and the various forms of light treatment should be considered in this connection. While recognizing the value of baths we should realize the danger from their use in certain diseases. Baths are too often given without proper medical supervision. Before patients submit to the use of baths for the treatment of disease, an examination and working diagnosis should be made in every instance. Many sudden deaths in the bath have been reported, that could have been avoided if the condition of the patient's heart and other organs had been known.

We ought to have a clearer idea of the usefulness and limitations of massage, exercise and electricity. While the osteopathic practitioner claims that his practice in no way resembles massage, most unprejudiced observers see in the good results of the method a stimulation of the circulation of the part closely allied to the benefits obtained from the use of massage. Regular exercise, especially if it be pleasurable, gives tone to the body, stimulates the circulation, and rests the mind. If physicians would call in oftener a competent masseur, in suitable cases, we should have fewer patients leave us for the osteopath.

In the field of orthopedics a very important advance in recent years is the better understanding of the value of sys-

tematic exercise in the correction of deformities. Even in laryngology massage has a place. There are patients, usually those who have occasion to use their voices in a professional way, who have voice defects from muscle tire. Singers and teachers whose voices become tired or husky after use, are often benefited by massage over the larynx and pharynx. It is necessary in these cases to exclude obstructive and inflammatory lesions.

Perhaps no agent has been used more to humbug the public than electricity. In the hands of the quack it has been employed for most every disease that flesh is heir to, and physicians too often use it promiscuously without adequate conception of its value or limitations. As a diagnostic measure in nervous diseases, it is very valuable. Most careful observers agree that its use as a therapeutic agent is very limited. It will stimulate the circulation, and through the nerve trunks improve the nutrition of the muscles. There is little evidence to show that the effect of electricity is greater than the use of exercise and massage, or certain drugs which have a selective action upon the nervous system.

Perhaps the impression will be gained from the above, that I am in favor of most every method except the use of drugs. On the contrary I am a firm believer in the value of drugs properly used in the treatment of disease, but no branch of medicine is more inadequately taught than the therapeutic use of drugs. In a recent number of the *Journal of the American Medical Association*, Mr. Bok, editor of the *Ladies' Home Journal*, severely criticises the medical profession for using preparations of drugs of which little or nothing is known of their composition. He rightly condemns the practice, which employs proprietary preparations and relies upon the statements of the manufacturer as to their action and composition. In the main I believe that his criticisms are just and well founded.

Biology and bacteriology for a time engrossed the attention of laboratory workers to the neglect of the study of purely chemical processes. A practical knowledge of the recent advances in chemistry will throw considerable light on physiologic processes, and will give valuable hints as to the value of chemical agents in therapeutics.

An article by Starling, on "The Chemical Control of the Body," contains many suggestions of practical value. He reminds us of the division, which Ehrlich made, of chemical agents that act upon the body, into toxins and drugs. He calls attention to the specific action which toxins and drugs have on the different tissues of the body. For instance, the toxin of diphtheria will produce certain definite symptoms, the toxin of tetanus, and the drug strychnine both have a selective action on the nervous system. As we learn more about the action of individual drugs we appreciate that each has its special action.

Our knowledge is very incomplete as to the action and nature of many of the internal secretions, but we know that they are chemical in nature, and each in turn has its special function. The relation of the thyroid to the metabolism of the body is well known, and its causative relation to certain diseases; such as, cretinism and exophthalmic goitre, is well recognized. As an excellent illustration of the practical possibilities to be derived from pure scientific research is our increasing knowledge of the action of adrenalin. Balfour has shown that the supra-renal glands have a twofold origin: the cortex being derived from mesoblastic tissue, while the medulla is formed by a direct outgrowth from the sympathetic system, and first consists of an aggregation of neuroblasts. The active principle of the gland is from the medulla, and Starling nicely points out that the action of adrenalin can be explained best by its stimulating effect

upon the sympathetic system. Thus he says: "In all the blood vessels of the body, adrenalin causes constriction; the contraction of the heart muscle is augmented, the pupil is dilated, while the intestinal muscle, with the single exception of the small ring of muscle forming the ileocolic-sphincter, is relaxed." If these facts and deductions are true it is a beautiful illustration of the intimate relationship between nerve excitation and excitation by chemical means.

Another interesting illustration of a chemical reaction in our body is the secretion of the alkaline pancreatic juice as the result of acid introduced into the duodenum. So long as the contents of the duodenum remain acid the pylorus remains closed. In other words there is just sufficient pancreatic juice secreted to neutralize the acid chyme. This was formerly thought to be due to reflex nerve action but is now known to be due to the formation of a chemical, by the action of the acid on the epithelial cells of the intestines. This chemical messenger has been named "secretin," and is carried by the blood to the pancreas. Starling says, "This body, secretin, can be regarded as a type of a whole group of messengers, which, formed in one organ, travel in the blood stream to other organs of the body and effect correlation between the activities of the organs of origin and the organs on which they exert their specific effect. For these chemical messengers we have suggested the name of "hormone."

Recent investigation has shown that ferments play an important part in the metabolism of the body, and that these ferments are formed in the tissues themselves. We have as yet no warrant in the belief that the use of artificial ferments produce any beneficial effect upon the body, as chemical changes would take place in the ferments long before the tissues are reached. Modern physiology has taught us that the final pro-

cesses of respiration and digestion take place in the tissues themselves, and that the respiratory passages and the organs of digestion are merely the means to bring the gaseous, liquid and solid food to the blood, thence to be conveyed to the tissues where the final changes take place through the action of the ferments. Changes formerly believed to be due to vital, or cell action, are now produced in the laboratory. The recent article by Dr. Stephenson, read before the Wayne County Medical Society on "Matter in the Ionized State," cited instances of how our newer knowledge has explained many obscure facts on a physical and chemical basis.

The facts cited above, drawn from various sources, show the practical value of some of the recent advances in chemistry and biology. Knowledge of the action of drugs is based upon animal experimentation, and should form the basis for their therapeutic use. Our empirical ideas are being replaced gradually by scientific knowledge. This is well illustrated by our increased knowledge of the cause and treatment of malaria. For a century, or more, it was known that the bark of the cinchona tree was beneficial in certain forms of fever occurring in low, marshy districts, in the southern latitudes. When the plasmodium malariae was discovered in the blood and proven to be the cause of the disease, a great step in advance was made; next it was ascertained that the mosquito, of the genus Anopheles, was the carrier of the infection; then the action of quinine on the life-cycle of the plasmodium was worked out; and finally the extermination of the mosquitoes from infected districts has made one of the most fatal fevers manageable.

Yet with these facts within the reach of all, it seems strange that a physician should call such knowledge "ultra-science." A homeopathic physician told me of the fine results he has obtained

from the use of minute doses of arsenic in the treatment of malaria. I inquired if the plasmodium was found in the blood. He admitted the blood was not examined, and that the diagnosis was made from the symptoms. I would not dogmatically say, with my limited knowledge of the action of arsenic, that this was impossible; but I feel that I am justified in being skeptical until the action of arsenic in this disease has been proven, with the same accuracy as has the action of quinine; and until the diagnosis is made by blood examinations, instead of by the symptoms.

Advance in the therapeutic use of drugs will come from the employment

of a small number of preparations studied experimentally, and used clinically in a large number of similar cases. The promiscuous, hit-and-miss use of a large number of preparations will never develop a scientific and logical knowledge of drug action. I have tried to point out in the above paper that we neglect often to avail ourselves of the knowledge gained from various sources. It is impossible to become familiar with all the work being done, so rapid are the advances in the various fields of medicine, but in proportion as we keep in touch with the trend of medical progress we will be better equipped to meet successfully the problems with which we are daily confronted.

NOSTRUMS AND PROPRIETARY PREPARATIONS

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The past twenty years have witnessed a large addition to the materia medica of new chemical discoveries, some of them possessing value. Among them may be mentioned various coal tar products and several new silver salts. Coincident with this valuable pharmaceutical development the country has been flooded with large numbers of preparations, introduced to the profession apparently as new products possessing marvelous properties. Many of these new preparations are merely mixtures of well-known drugs, given an attractive name and sold at several times their commercial value. Influenced by the undoubted value of some of the new chemical products, the medical profes-

sion has proven itself a ready prey to many of these nostrum venders, and has assisted some of them to accumulate large fortunes. Many of these products are really dangerous nostrums and contain drugs, the presence of which is denied in the advertisement, and, after the exploitations of the profession, have been openly advertised to the public as patent medicines. In most cases, however, the doctor has been reached with less expense than the lay patent-medicine buyer, and the doctor's influence in directing the attention of his patients to the ready made preparations prescribed by him has been depended upon to develop a lucrative business for the manufacturer. Until recently the doctor had no means of separating the chaff from the wheat in the multitude of new pro-

*Read at the Second Annual Meeting of the Third Councilor District, Battle Creek, October 6, 1908.

ducts presented to him. He could not analyze the preparations and for fear of missing some valuable agent like Argylol or others of the new silver salts he endeavored to test many of the new products upon his patients. In this way he made use of some very simple drugs like boracic acid for which he paid or caused his patient to pay a fancy price or he gave something that was positively harmful. Sooner or later the patient discovered the name of the ready-made preparation given him and the next time he thought he was sick in the same way he went to the drug store and asked for the proprietary preparation.

A few years ago the American Medical Association, recognizing the necessity of establishing a clearing house to furnish the doctors information concerning unofficial remedies, provided for the appointment of a council on pharmacy and chemistry composed of eminent chemists, whose duty it is to investigate any product offered to the profession and publish the facts concerning it. A large number of preparations have been examined by the council, and many have been approved. There is now no excuse for the doctor being taken in by nostrum venders or permitting himself to be made a "cat's paw" to pull rich chestnuts out of the fire for the advertising manufacturer. He can refer to the council any article presented to him and depend upon its being thoroughly investigated, and its nature exposed in the columns of his journal.

The council provided for the publication of an annual entitled "New and Non-Official Remedies" and adopted the following rules to govern them in their investigation of such remedies. The council desires physicians to understand that the acceptance of an article does not necessarily mean a recommendation, but that so far as known it complies with the rules adopted by the council.

Rules governing the admission of ar-

ticles to the book, "New and Non-Official Remedies."

Rule One. No article shall be admitted unless its active medicinal ingredients and the amount of such ingredients, nature and given quantity of the article be furnished for publication. The general composition of the vehicle, its alcoholic percentage, if any, and the identity of other preservatives must be furnished.

Rule Two. No chemical compound will be admitted unless sufficient information be furnished regarding tests for identity, purity and strength, rational formula, or the structural formula if known.

Rule Three. No article that is advertised to the public will be admitted, but this rule will not apply to disinfectants and food preparations except when advertised in an objectionable manner.

Rule Four. No article will be admitted whose label, package or circular accompanying the package contains the names of the diseases in the treatment of which the article is indicated. The therapeutic indications, properties, and doses may be stated. This rule does not apply to literature distributed solely to physicians, to advertising in any medical journals, or to vaccine and antitoxins.

Rule Five. No article will be admitted or retained concerning which the manufacturer or his agents make false or misleading statements as to the geographical source, raw material from which made, or method of collection or preparation.

Rule Six. No article will be admitted or retained concerning which the manufacturer or his agents make unwarranted, exaggerated, or misleading statements as to the therapeutic value.

Rule Seven. Labels on articles containing "poisonous" or "potent" substances must show the amounts of each of such ingredients in a given quantity of the product. A list of such substances will be prepared.

Rule Eight. If the trade name of an article is not sufficiently descriptive of its chemical composition or pharmaceutical character or is for any other reason objectionable the council reserves the right to include with the trade name a descriptive title in the book. Articles

bearing objectionably suggestive names will be refused consideration.

Rule Nine. If the name of an article is registered or the label copyrighted, the date of registration and the copy of the protected label should be furnished the council. In case of registration in foreign countries the name in which the article is registered should be supplied.

Rule Ten. If the article is patented, either process or product, the number and date of such patent or patents should be furnished.

Among the many remedies approved by the council are adrenalin, agurin, alphozone, acetozone, argyrol, aristol, aspirin, benzosol, brometone, cascara evacuant, chloretone, creosotal, dermatol, diuretin, euquinin, formin, ichthyol, piperazine, protargol and many others which may be found in the files of the journal, and in the annual which is a reprint from journal articles revised each year. This book, with the National Formulary and the Pharmacopeia will furnish information upon any remedy the doctor needs to use. The journal has also published a small manual of the U. S. Pharmacopeia and National Formulary, at forty cents a copy, that will be found a valuable assistant for the busy doctor in his clinical work. A book fully as large as the annual consists of reprints of articles describing substances that have failed to meet the approval of the council and from this reprint I propose to quote liberally concerning articles that have been advertised in this section.

Acetanilid mixtures, anti-kamnia. At first the formula of this drug was acetanilid 68, Caffein 5, citric acid 5, and sodium bicarbonate 20. You are all familiar with the nature of the advertising followed by this firm. When the Council of Pharmacy and Chemistry began its work of independent and scientific investigation of proprietary preparations some of the questions asked were, "What

guarantee has the medical profession that the formulas of these proprietary medicines are not changed at the will of the manufacturer?" "How can the physician who confidently prescribes them for his patients know that the preparation which he orders today is the same as that which was furnished him last year, or which may be given him next year under the same name?" At once a wail as of injured innocence went up from countless venders of proprietary medicines who replied with one voice, "The honor and reputation of the proprietors and manufacturers is a sufficient guarantee of the stability and permanence of these preparations." The enactment of the National Foods and Drugs Act is bringing many things to light. Among other things it has furnished a demonstration of the value of the honorable assurance of nostrum venders. The nostrum anti-kamnia has pointed many a moral in the campaign in the last few years. When the pure food law went into effect the proprietors of this mixture found themselves in a sad dilemma. If they labelled their mixture in accordance with the provisions of the law they would have to admit that it contained acetanilid. Failing to comply with the law they must go out of business. The latter alternative was not to be thought of. The profits gained by selling with the aid of careless or ignorant physicians a five or ten-cent mixture for one dollar were too great to be surrendered without a struggle. The same brilliant intellect perhaps that first saw the commercial possibilities in the business said, "Change the formula. Phenacetin is about as cheap as acetanilid. The patent has just expired and consequently we can get it at a low price. Let us substitute phenacetin for acetanilid."

What assurance has the profession that at any moment a more dangerous drug may not be substituted for phen-

acetin, if thereby the law can be evaded or the profits of the business enhanced? Salacetin; acetanilid 43, sodium bi-carbonate 21, sodium salicylate 20. Phen-algin; acetanilid 57, sodium bi-carbonate 29, ammonium carbonate 10.

Bromo-seltzer. A teaspoonful contains potassium bromide 7 grs., acetanilid 3 grs., and caffein 8 grs.

Gude's Peptomangan. In addition to furnishing formulas to the profession of many secret proprietary remedies, the council has done a good work in exposing objectionable advertising methods. The proprietors of this preparation, by garbling the report of the commission on the study of anemia in Porto Rico, attempted to show that the results of treatment by peptomangan were far superior to those obtained from Blaud's pills and from well known iron preparations. An extract from the report of the commission is as follows: "It will be noticed that slight cases recover without iron, and here the difference in the tables is more marked while there is less difference among the marked cases in proportion to the number. The rapidity of cure is due apparently more to the personal equation of the patient and the rapidity with which the parasites are expelled than to the amount of reconstructive treatment. Thus it is quite difficult accurately to judge the comparative value of different iron preparations. Yet it was noticed even by some patients that Blaud's pills gave more rapid results." We do not believe that a perusal of the histories of the eighteen cases which the advertisement quotes demonstrates the superiority of peptomangan as those patients recovered more slowly than others of the same type who took Blaud's pills. In fact on account of the slow recovery the carbonate of iron was substituted for peptomangan in five of the eighteen cases.

Tyree's Antiseptic Powder. This preparation advertised as a "Scientific

Combination of borate of sodium, alumin, carbolic acid, glycerine, and the crystallized principles of thyme, eucalyptus, gaultheria and mentha in the form of powder "is essentially a mixture of boric acid and sulphate of zinc, approximately four-fifths of the former to one-fifth of the latter.

Campho-phenique. This preparation is claimed to be composed of phenol 49%, and camphor 51%. Examination of specimens purchased in the open market demonstrate that these statements are not true. Instead of containing 49% of phenol, analysis shows that it contains not more than 20%. Instead of containing 51% of camphor, analysis demonstrates that the amount of camphor is not more than 38%. Besides phenol and camphor a third substance was found which proved to be liquid petrolatum and to be present to the extent of 38%. An examination of campho-phenique powder shows that 92% of it was a talcum-like inorganic substance. The remaining 8% consisted chiefly of camphor and a small amount of phenol.

Amolin. A deodorant powder advertised to the public as a coal-tar derivative of the phenol hydro-carbon series. Analysis shows it to be 99% boric acid and one per cent thymol. This should suggest to us that if we would give more thought and study to the official drugs at our disposal we would find ourselves depending less on proprietaries. To become conversant with all such drugs as have proved valuable therapeutic agents would not be difficult, for the number is not large. When we get down to facts we find that all patent or proprietary medicines that have any claim to therapeutic value depend for such value on some of these few proved drugs. This is well known in the cases of the too valuable but expensive drugs, boric acid and acetanilid, that form the basis of a large number of high-priced proprietaries. By disguis-

ing these well known chemicals through the addition of substances more or less inert and the substituting of names that either have no meaning or are misleading, the nostrum makers have been able to make millions of dollars.

How much better is the liquor antisepticus of the pharmacopeia, containing a solution of boric acid 2%, benzoic acid and thymol each 1%, and eucalyptol, oils of peppermint, gaultheria and thyme and 25% alcohol, put up by your own druggist, than listerine and other high priced proprietaries containing essentially the same formula?

Liquor antisepticus alkalinus. N. F. is an aqueous solution with 25% of glycerine, containing potassium bi-carbonate, sodium benzoate, sodium borate, oil of gaultheria, thymol, eucalyptol and oil of peppermint. Colored purplish with persionis it replaces the well known proprietary antiseptic solution. Prescribed in its official name and dispensed in a plain bottle this article will not become known to the public as a "cure all."

Vin Mariani. Before the enactment of the Pure Food and Drugs Act advertisements of this preparation claimed that it contained no cocaine. The label upon the bottle under the food and drugs act says, "One oz. represents 1/10 of 1 grain of cocaine." The advertisements also make unwarranted, exaggerated and misleading statements as to the therapeutic value. It is, in fact, a beverage containing cocaine.

Anasarcin and Anedemin. These preparations are both manufactured in Winchester, Tenn., a small town of about 1,500 inhabitants. The following is the report of the council upon anasarcin. This remedy is offered in two forms, anasarcin tablets, a pretended combination of the active principles of oxydendrum, arboreum, sambucus canadensis, urginea scilla and anasarcin elixir, said to contain the active principles of oxydendrum, sambucus, hepa-

tica and potassium nitrate. The advertisements of these articles conflict with the rules of the council as follows:

With rules one and two. The composition of these articles is kept secret in that the proportion of the ingredients is not furnished. The statement that it contains the active principles is misleading since these are for the most part unknown. With rule six. The description of the pharmacologic action of anasarcin agrees practically with that of squill. No material part of its effects can be attributed to the other ingredients. Nevertheless the advertisement studiously cultivates the impression that anasarcin has no relation whatever to the digitalis group in which scilla is commonly placed. The claims are therefore misleading. The claim of its infinite superiority to digitalis; the claims that it cures neurasthenia, eliminates uric acid in rheumatism and is useful in obesity, cystitis, lumbago, eclampsia, dyspepsia and asthma and that it works wonders in exophthalmic goitre appear exaggerated or false; the recommendation of its indiscriminate use in nephritis for lowering the blood pressure and the statement contradicted in the firm's own literature that it is not depressing, are actually dangerous.

Anedemin is an imitation of anasarcin. The therapeutic claims are copied almost literally from the anasarcin circulars and are equally false. This wonderful remedy, anasarcin, is a typical sample of the revival under a new name and thin disguise of the old-time worn article, squill, the use of which in dropsy has been practically discarded, presumably because experience has demonstrated its general inferiority to other drugs. Anasarcin in dropsy illustrates the traits involved in the use of semi-secret nostrums. It also shows how a short experience with the widely advertised but low standard drug is apt to lead to conclusions which more extensive experi-

ence demonstrates to be entirely fallacious.

The first lesson is that formulas are not always what they seem. A hasty glance at the formula of anasarcin tablets, the basis of the anasarcin dropsy cure, creates the impression that it is a non-secret remedy. As a matter of fact it is a secret nostrum of the insidious kind. A formula which omits the quantities of its ingredients means very little. Further than this, we do not hesitate to charge that the claimed composition is a deliberate deception. The circulars emphasize the claim that anasarcin consists of the active principles and not of the crude drugs. Now the active principles of sambucus and oxydendron are not on the market for the good and sufficient reason that no active principles have ever been isolated. Oxydendron, the sour wood or sorrel tree, is a small tree of the Heath family. Sambucus is the common elder. It is most unlikely that these two substances should play any part in the claimed powerful effect of anasarcin. They are evidently put in the formula, we do not say in the preparation, to obscure the fact that anasarcin is composed principally of squill. In brief then, it appears from the statement of the Anasarcin Company that the action of the remedy is that of squill and that the other ingredients are a mere blind. It is, of course, well known that squill can be used as a substitute for digitalis in cardiac dropsy although it is generally considered very inferior to the latter drug.

Any one wishing to use squill should take the trouble to acquaint himself with the results obtained by a competent and independent observer. He should also learn all contra-ingredients in the use of squill deducible from the fact that it causes vasomotor constriction and lowering of blood pressure, prohibiting its use in Bright's disease and arterial sclerosis, that it produces marked gastric irri-

tation, consequently nausea and depression, that it is a very toxic agent, and that the dangers of accumulative action must be born in mind. In respect to this the attempts of the anasarcin people are a little short of criminal, "That it is safe in administration. Non-toxic, as ordinarily administered. Will nauseate some persons but the reaction from the temporary depression is prompt. In Bright's disease, the interstitial and parenchymatous form of nephritis, no remedy to equal it in efficacy."

The company manufacturing anasarcin is located in Winchester, Tenn., a town of about 1,500 inhabitants, situated in an agricultural country. The town boasts of neither scientific schools, colleges, universities or laboratories. The office is in the rear of a jewelry store, in the business part of Winchester. On the second floor above, according to our reporter, the office force of about ten stenographers and clerks handles the correspondence and labels and sends out the preparation which is made in a crude frame building, located on a side street without a laboratory equipment.

Anasarcin tablets are sold for \$2 per box of 100. A formula containing extract of sour-wood leaves, 2 grains, extract of elder flowers, 2 grains, and extract of squill $\frac{1}{4}$ of a grain, is put up in tablets by Park, Davis & Co., and sold in bottles of 100 for 50 cents.

If any physician desires to prescribe this formula, he would be doing justice to his patient's pocketbook to prescribe the Parke, Davis tablet.

Purgen. The physicians of the United States are receiving a neat package containing samples of the German proprietary, purgen. The container is an ingenious one and besides the tablets includes a circular in English, although mailed in Europe, describing the remarkable virtues of this new synthetic aperient. Physicians should understand that the promoters of purgen are simply in-

roducing a chemical well known to laboratory workers for the last twenty years, which has been recognized an aperient for at least seven years, and which can be purchased for 40 cents an ounce, whereas an ounce of phenolphthalein in the form of purgen will cost \$3.20 wholesale. Phenolphthalein is not in the Pharmacopeia, but has been included in "New and Non-Official Remedies" by the Council on Pharmacy and Chemistry.

Calcidin. In the advertising literature of the Abbott Alkaloidal Co., it is claimed that "calcidin, Abbott," produces therapeutic effects entirely different from those obtained from iodine in any other form. An analysis of the powder gives the following results: Available iodine 9.20%, calcium iodide 5.71, calcium oxide 18.45, calcium carbonate 34.85, corn starch 16.13, iron and aluminum traces, magnesium oxide .35, water 15.71. Calcidin is essentially a mixture of iodine, calcium iodide, lime and corn starch, and the preparation is made by mixing ordinary iodine, lime and corn starch, the calcium iodine and calcium iodate being formed by the action of the lime on the iodine in the presence of moisture. The exact amount of calcium iodide found in different specimens of calcidine will vary in accordance with the amount of moisture present and the age of the product. While it is claimed that calcidine produces therapeutic effects entirely different from those obtained from iodine in any other form, the introduction of calcidine in the acid stomach contents results in such chemical changes that it corresponds to giving iodine, calcium iodide, and calcium chloride, each one grain, the calcidine being equal to about $1/10$ of a grain of iodine, $1/15$ of a grain of calcium iodide and $4/5$ of a grain of calcium chloride. As a comparison the average dose of Lugol's Solution is three minims, and these three minims contain $1/6$ of a grain of iodine. A dose of calcidine is given as $1/3$ to 2 grains, and

this will contain from $1/30$ to $1/5$ of a grain of iodine. Calcidine, however, is usually prescribed in tablet form, and it has been demonstrated that the tablets do not have the same composition as calcidine itself, but instead are essentially the tablets of calcium iodide. While one grain of calcidine is equal to $1/10$ of a grain of iodine, 3 calcidine tablets, which represent one grain of calcidine are equivalent to but $1/83$ of a grain of iodine. While the recommended doses of calcidine itself will contain $1/30$ to $1/5$ of a grain of iodine, the same amount given in the form of calcidine tablets is equivalent to $1/250$ to $1/40$ grain of iodine.

Iodide of Lime, Nichols. Iodide of Lime, Nichols, is essentially a mixture of lime and iodine, containing about 10% iodine. Iodide of lime tablets, like calcidine tablets, differ in composition from the original substance which they are supposed to represent. Iodide of Lime, Nichols, was found to contain approximately, 10% available iodine. Each $1/3$ grain tablet should therefore contain about $1/30$ gr. of available iodine. Instead it was found that each tablet was equivalent to $1/128$ gr. of free iodine. It is worthy of note that the tablets appeared decidedly brown in color which might be taken to indicate that they really did contain a considerable amount of free iodine. The examination, however, showed that the brown color was due to presence of a large amount of iron oxide.

Hyoscine, Morphine and Cactin Tablets. Some eight years ago a combination of Scopolamin and Morphine was introduced in Germany as an anesthetic. Since then it has been extensively used in Germany, France, Italy, Russia, United States and elsewhere and medical periodicals have contained many articles, reports, etc., on the subject. While the method and technique originated in Germany, and while it has had its greatest

use in that country, it has also been used more or less extensively in every other country, including the United States, and reports both favorable and unfavorable have appeared in all these countries. Two years ago the Abbott Alkaloidal Co. put on the market as a new anesthetic, a tablet said to contain 1/100 grain of Hyoscin, 1/4 gr. of morphine and 1/67 gr. of a product called cactin. During the past year this tablet has been exploited to an extent and in a manner not equalled by any other medicinal preparation in this or any other country. Full page advertisements and reading notices, all extremely laudatory of the preparation, have appeared in medical journals of all kinds. More original articles highly praising it have been published than have ever appeared in the same length of time on any other one medical subject. The conclusion that the alkaloid obtained from hyoscyamus and that obtained from scopolamin are identical chemically, physiologically and clinically was reached some years ago. The Abbott Company, however, does not accept this conclusion. An editorial in the issue of their journal for December, 1906, under the title, "Another Death from Scopolamin," contains an abstract of a report of a death in Europe and closed by saying, "If Rys had employed pure hyoscyne hydrobromide with morphine, it is probable that there would have been no fatality." From a letter from Dr. Abbott, published in the Journal, January 26, 1907, I quote. "I am perfectly well aware that Scopolamin is claimed by some to be identical with hyoscyne, but the fact remains that the same therapeutic results are not obtained from one that are obtained from the other." The following quotation is from Lanphear: "Hyoscyne hydrobromide is a drug, of known strength, and apparently perfectly safe, whereas Scopolamin is notoriously unreliable."

The Pharmacopeia of the nation is the

standard according to which drugs are manufactured and by which they are judged. In all cases these standards are recognized by law. They are the highest authority. "The alkaloid on the market as Scopolamin hydrobromide or Hyoscyne hydrobromide is not made in the United States. So far as we are able to learn it is made only in Germany where the subject has been given more attention than elsewhere, and consequently is made according to the German Pharmacopeia, but the German Pharmacopeia recognized the alkaloid only under the name Scopolamin Hydrobromide. Hyoscyne Hydrobromide was introduced in the German Pharmacopeia in 1891, but later the Pharmacopeia commission adopted the name, Scopolamin Hydrobromide, to replace Hyoscyne Hydrobromide since the identity of the hydrobromide from the different sources has become established. Hence the German Pharmacopeia no longer retains the name Hyoscyne Hydrobromide, for to do so would be to give two names to the same article, as we shall see one nation does, and officially recognizes the same alkaloid by two different names. The United States Pharmacopeia, eighth revision, which became official in 1905, adopted the new and more correct name Scopolamin Hydrobromide, and at the same time retained the old name Hyoscyne Hydrobromide. The definitions are as follows:

Hyoscyne Hydrobromide, the hydrobromide of an alkaloid, chemically identical with Scopolamin. Obtained from hyoscyamus and other plants of the Solanaceæ.

Scopolamin Hydrobromide, the hydrobromide of an alkaloid, obtained from the plants of the Solanaceæ, chemically identical with Hyoscyne Hydrobromide.

The British Pharmacopeia, issued nine years ago, described an alkaloid under the definition Hyoscyne Hydrobromide, but gives as a synonym, Scopolamin Hy-

drobromide. The Danish, the Swiss, the Netherlands, and the Japanese Pharmacopeia, all of which have been revised recently, described the alkaloid under Scopolamin Hydrobromide but did not mention Hyoscine. From this it will be seen that these two names legally belong to the same alkaloid, and it has been sufficiently demonstrated that this alkaloid in combination with morphine is often dangerous to life. The claim

that H. M. C. Tablets, Abbott, are safe in doses recommended is not true. I have myself been so unfortunate as to have a fatal case from a single tablet and within a few weeks another fatal case from a single tablet has come to my knowledge in a neighboring city.

Therefore, so far as I am concerned, the use of this combination has been permanently abandoned.

PERPLEXING POINTS IN SERUM THERAPY

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Some of the recent work on the therapeutic uses of serum may have the effect of making physicians feel over-cautious in the use of all serums.

It is difficult to say whether many physicians have a fear of the therapeutic use of serum or whether they have not. A few years ago one might have said "All the doctors understand about antitoxin now," and since that time it seems that there have been enough papers written to clear up all doubtful points, and yet at the present time it is not easy to demonstrate the physician's state of mind on this subject.

In our every-day consideration of antitoxin there are certain points which should first come to mind:

In what cases would one fear to use serum?

Is antitoxic serum any more dangerous to give patients than normal horse serum?

Would you use serum after the expiration of the date on the label?

Has serum any bactericidal action?

Is it true that an excessively large dose will do no harm?

What is Concentrated Diphtheric Antitoxin, and is there any advantage in using concentrated antitoxin?

What is meant by sensitization.

Why do rashes and joint pains sometimes follow the injection of serum?

What is meant by a unit of antitoxin?

* * * *

One of the incidental facts a doctor should know is that the toxin is not a simple poison like certain drugs, but is a complex substance, being the products of the secretion of the bacilli and contains various forms of poison just as the quinine plant does for instance; and we know that cinchona bark contains about 20 different alkaloids. Another incidental point is that the various diphtheric antitoxins are the same. The U. S. government has established a standard method of testing diphtheric antitoxin to which all biologic laboratories conform, and it is the duty of the government to examine the products of the laboratories and whenever they are found

deficient in quality their immediate withdrawal from the market is demanded. The standard is not one which all must equal and some may exceed, but is one which fixes the quality of the product. It therefore follows that one antitoxin is as good as another, and none is better than another.

It is possible that there are differences in serum that we do not know much about, differences which we are unable to detect with our present tests. We know that there are differences in antitoxic serum from animals of the same species; for which we are unable to account. Some horses are incapable of immunization. In biologic stables horses are frequently treated with toxin for a number of months, and then discarded because their serum does not give evidence of sufficient antitoxic strength to make them desirable animals for serum production. Some horses cannot produce antitoxin, and after we get it there are some people who cannot safely take it. There are certain cases in which one would hesitate in using serum for fear of disastrous results. They include those patients suffering from bronchial asthma and those in which there is a persistence of the thymus gland (*status lymphaticus*). This is as far as our present knowledge is at all positive. The theory of over-neutralization of the poison and of the presence of inert substances and several others that have been put forth seem to be unsatisfactory and not sufficiently substantiated.

It is unfortunate that this possible danger to the patient can not be determined more fully. We do not understand much about it as yet, but ten years ago we did not know that the danger existed. A man who has been engaged in serum manufacture for about ten years said a short time ago that the last ten years have not taught us much about serums; it has only shown us more things that we do not know.

The percentage of sudden deaths following the injection of antitoxin is so small that no greater fear for antitoxin is justified than for anesthesia. We do not know the cause of sudden death after serum injection, and we do not know the cause of sudden death during anesthesia.

The explanations we give are, however, most alarming, inasmuch as we usually grasp some rare and obscure condition as a cause.

A number of years ago antitoxin was regarded as almost a magical treatment for diphtheria, which would either kill or cure. We now realize that antitoxic serum is no more poisonous than normal serum, and that the same peculiar properties of white of egg makes its subcutaneous injection even more dangerous under certain conditions. On the label of each package of diphtheric antitoxin may be found a date up to which the maker guarantees the number of units which it contains. In regard to the use of serum after the expiration of the date it would seem that there is little or no danger of depriving the patient of proper protection by so doing. A number of tests on serum which had been on the market from three to seven years has shown the same number of units as was stated on the label. The recent work by Woodhead showed no deterioration in about 70% of one hundred and ten serums examined at intervals of from one to 28 months.

The period in which antitoxin is least stable is during the first few weeks after it has been drawn from the horse. Serum is not tested, labelled, and sent out from the laboratory until after that time, so there is little deterioration in the serum on the market. Most of the serum sent back for exchange after two years is probably still up to the original number of units. One must realize that the date is arbitrary and that the serum could not be fully up to the number of

units the day before and way below the number the date after, although the serum became exchangeable for new serum at that time.

Serum should be kept in a cool dark place, and in many drug stores the ice in the soda water fountain conceals our weapon against diphtheria.

By several investigators serum has been shown to have a bactericidal action. Experiments have been made which have shown this action toward various organisms. The bactericidal action of serum in the body of the patient is one of the fundamentals of the fascinating opsonic theory. In opsonic work it has been demonstrated the normal serum has a powerful action on bacteria and prepares them for phagocytosis. Normal salt solution and other indifferent fluids do not have such action.

The bactericidal action of serum is well shown by opsonic work and experimental work outside the human body.

Normal horse serum has been used with excellent results more in England than in this country in cases in which a powerful alternative seemed indicated.

Dr. A. E. Wright has said that serum treatment with certain exceptions has not been successful. It may be too soon to pass judgment on opsonic treatment, but his remark might be true of anything from which one expected too much.

There may be sharp limitations to the usefulness of antitoxin and likewise for bacterial vaccines. Antitoxin treatment was a revelation to science and physicians required time to calm down to correct thinking about it. Bacterial vaccines have come from one of the latest scientific exploits, and we have not yet settled into a fixed estimation of them.

It is true that we formerly believed the dangers of antitoxin to be conjectural and the benefits certain and positive. Now that certain dangers from sensitization have been shown on the lower animals, the question arises, "Is it true that

an excessively large dose would do the patient no harm?"

Yes, as far as can be determined, any initial dose of serum which is in excess of the required amount has no injurious effect upon the patient. There is no reaction nor special symptoms, when the dose is unnecessarily large. The patient is unaffected by the surplus. In repeated injections of the serum however other factors would come in for consideration.

The concentrated diphtheric antitoxin which has lately come into extensive use gives us an antitoxin of reduced volume and of clear bright appearance and less sticky than serum, being almost as liquid as water. It was claimed by Gibson and others that nonessential elements had been eliminated and that rashes, joint pains and other reactions occurred less frequently. Recent experimental work has shown that weight for weight and volume for volume the concentrated diphtheric antitoxin and whole serum possess equal power of sensitizing animals.

All of the people engaged in the production or use of serums have been very much interested in the work on sensitization which has been done at the U. S. hygienic laboratory.

In the experimental work a condition of hypersusceptibility was produced in guinea pigs by the injection of serum, normal or antitoxic or by protein substances. After an interval of twelve days or more during which time the animal became sensitized, another injection was found to cause great symptoms or death of the animal between 10 and 30 minutes after the injection. It was also shown that frequently repeated small doses (2 c.c.) did not sensitize the animals.

No human experiments have been made, so we do not know whether man could be sensitized in the same way or not. After an animal had been sensit-

ized a very small dose produced fully as grave symptoms as a large dose. The time required for sensitization to develop is ten or more days after the first injection of serum. In the diseases in which serum treatment is commonly used, one would expect either recovery or loss of the patient in that length of time. In an acute or severe illness, it would not be advisable to minimize the dose for fear of sensitizing the patient.

* * * *

Just why rashes and joint pains sometimes follow the injection of serum is without any satisfactory explanation. Records, which have been kept in hospitals show that they occur in about one-third of all cases, regardless of the make of the serum, site of injection, severity of the case, or whether the serum was obtained from horses, goats or other animals. Rashes seem to be the result of some quality of the serum and susceptibility of the patient, since they may occur after injections of normal serum as well as antitoxic serum. Such reactionary effects occur less frequently after single injections of serum than they do after prolonged serum treatment. How much serum is meant by a unit? The unit is the measure of strength of antitoxin. Antitoxic serum as it comes from the horse is of unknown strength. One can not judge of its strength by the amount of toxin that has previously been given to the animal or in any other way.

The serum must be tested after it has been separated from the blood cells. If it is strong in antitoxic power, it requires less volume to each syringe in which it is put on the market. So that 3,000 units for instance is not a fixed volume, it may be 5 c.c. or more or less according to the antitoxic power of the serum. A unit is the amount of serum which will neutralize a given amount of toxin of known strength. That is the way we determine what volume of each lot of serum it will take to represent 3,000 units or 4,000 units, etc.

The unit is a measure of strength, not of quantity. The test of strength is physiologic being determined on guinea pigs. Method used is against a diphtheric toxin of known strength. The quantity of diphtheria toxin which will neutralize one immunity unit plus a quantity necessary to kill the guinea pig weighing 250 grams on the fourth day is an L+ dose.

That quantity of serum necessary to add to the L+ dose of the toxin so that the mixture injected subcutaneously will kill a guinea pig weighing 250 grams on the fourth day contains just one immunity unit. The quantity of serum representing a unit is a very minute amount, much less than one drop.

The points we have considered are those which may occur to encourage or perplex us almost every time we use serum. Many other points may come up as well, as every case presents its own peculiarities and its own problems. They are important points inasmuch as the brilliant results which follow the proper application of serum treatment may be seriously affected by lack of consideration of them.

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THE TECHNIC OF SUPRAPUBIC PROSTATECTOMY.

G. H. PALMERLEE, M. D.,Detroit.

Before describing the technic of the operation it is very important to consider briefly a few points in the anatomy of the prostate. The prostate gland is a musculo-glandular organ which surrounds the neck of the bladder and the beginning of the urethra in the male. It is situated above the deep layer of the triangular ligament, and behind the lower part of the symphysis pubis, its posterior surface resting on the rectum.

In fetal life the gland is in two distinct lobes, i. e., right and left, while the so-called third lobe, which is not constant, is nothing more than a small prominence in the notch between the lateral lobes, where the bladder opens into the urethra. The so-called third lobe is often the principal cause of obstruction, by acting as a ball valve and thus preventing the emptying of the bladder. In many instances the hypertrophied third lobe conveys the impression, through the medium of the catheter or sound, of a foreign body in the bladder, it being impossible to differentiate it from an encysted calculus. At birth the lateral lobes have become approximated, forming the anterior and posterior commissures and surrounding the urethra, yet the lobes may be easily separated. However, while the lateral lobes are welded together, they are, as far as function is concerned, as separate as the testes; each lobe is enveloped in this fibrous tissue called the true capsule; and the whole gland is again surrounded by the pelvic and rectovesical fasciae, forming the sheath. It is this covering that is of so much im-

portance from a surgical point of view, since the gland must be enucleated from it with the least possible trauma.

The blood supply is from the internal pudic, vesical, and hemorrhoidal arteries. The veins of the prostate empty into the internal iliac, therefore, it is evident that great hemorrhage will follow the breaking up or tearing to pieces of the external sheath.

Investigations of the anatomy of the prostate gland by such men as Freyer, Thompson and Richardson, although differing from the text books, can not be ignored. Their studies show that the blood vessels ramify in the sheath, and that in hypertrophy of the prostate the vessels are greatly enlarged.

In the practice of Dr. J. B. Kennedy and myself, we are frank to admit that the mortality of our cases has been higher than some operators and we believe this to be due, not alone to our not properly selecting our cases, but in some of our earlier cases, to error of technic in not preserving the sheath as much as possible.

Dr. J. B. Kennedy's present technic is as follows: The patient is anesthetized and prepared in the usual way for laparotomy. The incision is made through the skin just above the pubis for about three inches and a little to the right and the recti muscles and fasciae separated; the bladder is filled with boric acid solution, so as to push the anterior bladder wall upwards. The pre-vesical fat now presents itself and is dissected upward and the anterior bladder wall exposed below the peritoneal fold which

may be recognized by a transverse white line. The bladder wall is punctured with the point of the knife and the incision enlarged with abdominal scissors; the metal catheter through which the bladder was filled is left in place and held by an assistant.

The left hand is passed under the

and locates the tip of the catheter in the upper part of the superior commissure. The finger is pushed over the catheter and under the external sheath along the superior commissure which separates the lateral lobes, and does not attack the most prominent part of the prostate, since the finger is liable to

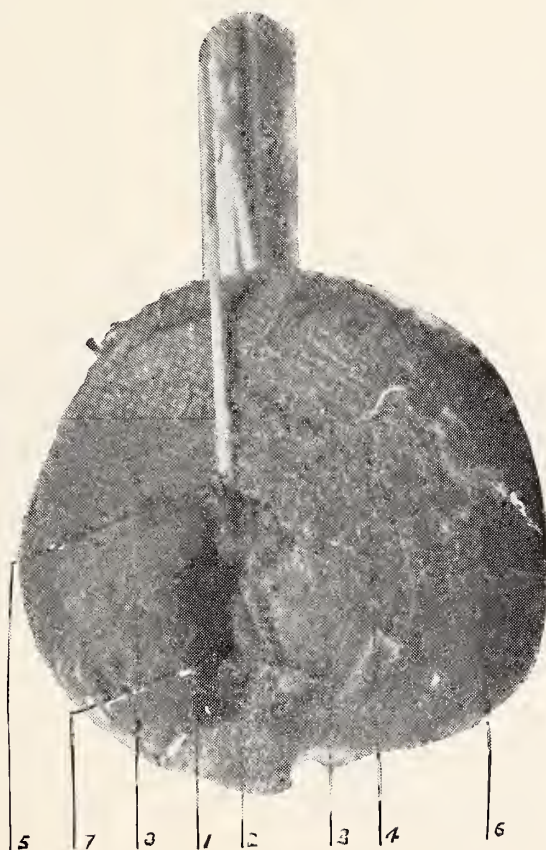


Fig. I.—1. Tip of Catheter. 2. Third Lobe. 3. Right Lobe in Its True Capsule. 4. External Sheath. 5. Cord Passing Through Superior Commissure. 6. Torn Blood Vessel in the External Sheath. 7. Point of Entrance for the Finger at the Beginning of Enucleation. 8. Left Lobe.

patient's left thigh, the first and second fingers protected by a glove, are inserted into the rectum and the prostate pressed up as far as possible towards the enucleating finger. The operator now introduces his index finger of his right hand through the suprapubic wound

wander outside the external sheath, which act will tear it to pieces and cause dangerous if not fatal hemorrhage; but by using the tip of the catheter as a guide to entering the superior commissure, and passing the finger along the catheter it is inside the external sheath,

because the external sheath does not dip down between the lobes; and again the finger passing along separates and easily loosens the lateral lobes from each other and the superior surface of the lobes are freed from their attachment to the external sheath. The finger is

superior commissure or the starting point; this frees the lobes from the external sheath, except where they join the triangular ligament. This point is next attacked by passing the finger along either the superior or inferior surface of the lobes and hooking the finger

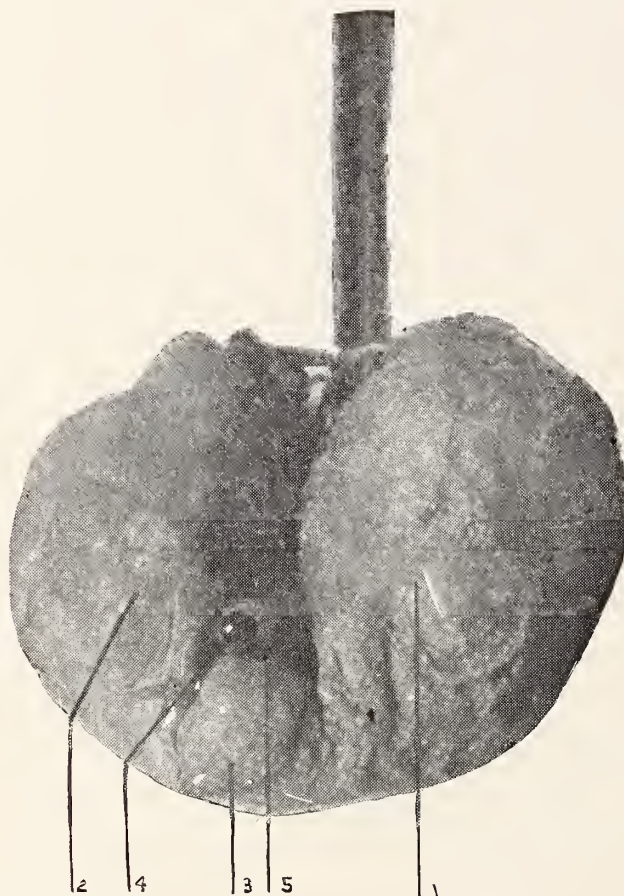


Fig. II.—1. Right Lobe. 2. Left Lobe. 3. Third Lobe. 4. Tip of Catheter. 5. Superior Commissure. Time occupied in removing this gland was one and one-half minutes. This man aged 76 left the hospital 17 days after the operation. The suprapubic wound was entirely closed and the bladder control was complete.

passed along in this manner as far as the enlargement extends or to the triangular ligament.

The next step is to sweep the finger over and around the lobes to the inferior commissure; keeping close to the gland and continuing around the lobe to the

over the end of the gland; it is thus dissected loose and removed. Some operators advise nicking the mucous membrane of the bladder over the most prominent enlargement but, in our experience in a series of 85 cases, and as we previously mentioned, from the

mortality in our early cases, we believe that it is of the greatest importance to use extreme caution to first make sure that the finger is guided into the superior commissure by the tip of the catheter, and between the sheath and the gland.

Of the 85 patients operated on in the practice of Dr. Kennedy and myself ten died following the operation, two from hemorrhage, two from uremia, one from embolism, two from pneumonia and the others from exhaustion; these latter had septic bladders and they were bed ridden and very unfavorable cases for operation.

As a rule there is not much hemorrhage and if there is a little bleeding it can usually be controlled by boric acid solution at 120 F. Should there be a profuse hemorrhage, however, following the operation, which cannot be controlled by the hot boric acid solution, we do not hesitate to make a small opening through the perineum and pass through this opening, from the suprapubic wound, a cord to which is attached a sterile piece of gauze rolled into a ball large enough to fill the cup shaped cavity left by the enucleated gland; by making tension on the cord and fastening it to the thigh with adhesive plaster the pressure of the gauze will control the hemorrhage. A drainage tube is placed in the wound and a part of the skin wound closed by three or four silk worm sutures. A liberal amount of gauze is now placed over the abdomen and covered with a pad, and this dressing is changed about every two hours. After the third day the tube is removed and bladder washed out through the urethra and through the suprapubic wound, occasionally passing a catheter. The wound is allowed to granulate and is usually closed in three weeks. About the third or fourth day the patient is allowed to sit up in a wheel chair.

In cases when the bladder is infected and urine is full of pus we do the operation in two steps; first doing just a suprapubic cystotomy, thus allowing the bladder physiological rest, using irrigation every day. This has been our procedure for three years in this class of cases and we find that the termination is more favorable, since the first operation is very short, and allows the patient to recover from his septic condition which is made worse by doing the whole operation at once; the patient suffers more shock, which he is little able to withstand, besides favoring a fresh site for the entrance of infection in the cavity recently occupied by the prostate.

The bladder is irrigated every day with boric acid solution or sometimes 1-8000 nitrate of silver solution, and in about ten days or two weeks the bladder becomes clean, and the patient is in a much better condition for operation, and the gland is removed at this time.

The time occupied in doing the operation varies with the case of course, and is a matter of considerable importance to this class of patients who usually do not stand well a prolonged anesthesia. I have seen Dr. J. B. Kennedy do the enucleation in fifty-five seconds, rarely does he take longer than three minutes.

The accompanying cuts serve to illustrate the extremely important points in the technic mentioned above. Figure No. 1. This is one of our first cases (this patient died of hemorrhage). It can be seen at a glance that this gland was removed with an intact external sheath, which still surrounds it; whereas, had the gland been enucleated from the sheath, it would appear like Fig. No. 2. Notice how the lobes fall apart because the external capsule or sheath was left behind. In Fig. No. 1, note cord passing through the superior commissure and under the sheath.

In cases of simple hypertrophy or non-malignant growth of the prostate the above points in technic should be borne in mind, but if the growth be malignant, it is impossible to remove the gland from the sheath completely, because of the tendency to infiltrate into the surrounding tissues. We are then confronted with the same problem as in cancer of the breast and uterus.

We are aware that the suprapubic method does not meet with much favor with some good surgeons. There are many operators who are as strong advocates of the perineal method as we are of the suprapubic method. However, we think the disadvantages of the suprapubic operation, as claimed by a few surgeons, are more imagined than real.

In our series of cases, extravasation of urine has never occurred; neither has there been hemorrhage into the scrotum; and in no case has a permanent fistula resulted.

Conclusions.—The suprapubic operation can be done more rapidly and affords better opportunity for examining the bladder and the removal of calculi often present in these cases. Wounding the rectum in the hands of a competent operator is almost impossible. The third lobe is not overlooked. The suprapubic wound is usually closed and the patient able to urinate voluntarily in three weeks; occasionally, however, the wound closes in two weeks and the patient is able to go home, having complete control of the bladder.

"Paracentesis" is a misnomer. The drum should be *slit* from below upwards and near the posterior margin, throughout its entire extent. In withdrawing the knife it may be allowed to cut deeply into the upper canal wall near the drum (internal Wilde's incision).—*American Journal of Surgery*.

If one suspects acute cholecystitis and on opening the abdomen does not find the gall-bladder enough diseased to warrant further procedure, it is best to anchor the tip of the organ by suturing it to the abdominal wall. If further symptoms are manifested, the gall-bladder can then be opened without anesthesia and a catheter inserted for drainage.—*American Journal of Surgery*.

Pain in the ear, increased on traction on the auricle, with slight diminution, if any, of hearing, suggests a furuncle in the meatus. Introduce the speculum with great care. The probe will often reveal a point of marked tenderness.—*American Journal of Surgery*.

Don't incise a furuncle of the auditory canal. Tampon the canal with a wick of cotton or gauze saturated with liquor Burorii (acetate of aluminum), resorcin-alcohol, or balsam of Peru, and wait until pain has disappeared. Hot applications may be needed. A furuncle pointing and threatening to burst may be opened with a superficial cut. Avoid wiping the pus along the canal, the result is almost inevitably a fresh crop of furuncles.—*American Journal of Surgery*.

A persistent sinus after an operation for appendicitis in the majority of cases means that a portion of the appendix has been left behind. It may also mean that an exudate has not broken down or that some foreign body has been left in the wound. One should give the sinus an opportunity to close by itself, but if it does not do so, a prolonged operation is necessary. The walls of the sinus must be carefully excised, all rents in the serosa of the intestine sewed over and drainage instituted, as there is often considerable oozing from raw surfaces. First and foremost, the primary cause of the sinus must be found and corrected.—*American Journal of Surgery*.

The Journal of the Michigan State Medical Society

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DECEMBER

Editorial

Uniformity of medical laws in the various states is much to be desired. The American Medical Association, acting through its committee on legislation and public policy, has been laboring for several years to bring about such uniformity along several lines. From the viewpoint of both the profession and the public, one of the most important subjects on which state laws should agree, is that of the qualification to practice medicine. There are those who are ever clamoring for a national licensing board; one hears it talked of in medical meetings and now and then resolutions are passed endorsing such a board. Urgently as we need it, a national board can never be created, for the granting of a license to practice medicine is one of the police duties of the commonwealth and cannot, under the United States constitution, be taken over by the national government. Efforts, therefore, must be directed toward the enactment of uniform laws in all states and a broadening of the reciprocal relations of the various state boards. These boards have acted on the principle "that it is not necessary to wait for the millenium of uniform requirements before extending to the worthy and well qualified individual the advantages of reciprocity," and have established such between three-fourths of

the states. The different standards, however, make the work complicated and difficult. The time may come when there will be such uniformity that a license to practice in one state will be equivalent to a national license.

State legislation regarding pure food and drugs should be uniform. The present national pure food law applies only to such articles as come under the jurisdiction of the inter state commerce act—i.e., articles which are shipped from one state into another. In many of the legislatures, there will be introduced at the coming sessions, pure food bills drafted from a common model.

Uniform laws regarding the reporting of contagious diseases are also much to be desired. One of the results of the active campaign against tuberculosis, the educational value of which has never been equalled by any movement of the kind, will be the awakening of sentiment in favor of better and more uniform health laws in the various states.

Vital Statistics laws are most important, for upon the accuracy and uniformity of vital statistics depend all the important data secured by the census department regarding longevity, diseases, births, effects of occupation, etc. This information is most necessary in many commercial undertakings and is of the utmost economic importance. The American Medical Association has prepared a Vital Statistics Bill, which will be brought to the notice of all state legislatures.

These are but a few of the subjects along which progress is being made. Much has been accomplished, but the work is still in its infancy. It is the duty of the medical profession not only to initiate, but also to stand behind all endeavors which are being made to better the conditions under which our people live.

The campaign against tuberculosis in the United States has made marvelous

strides in the past two years. So much has been written concerning it, both in medical journals and in the lay press, that the subject has ceased to be novel, yet there is danger that there will be a reaction from the present enthusiasm and a loss of interest on the part of the profession, resulting in half completed work. The reports of the meetings of the recent International Congress in Washington, focused attention upon the work and afforded an opportunity for reviewing, in detail, the achievements of the past few years. Even the active workers have been surprised by the reports of the growth of public interest, for few realized how widespread this interest had become.

The National Association has devoted a portion of the income from the Russell Sage Foundation to the publication of a directory of the anti-tuberculosis movement. It contains classified lists of sanatoria, hospitals, day camps, dispensaries, tuberculosis classes, associations, state laws, typical forms of organization, etc. The book is extremely valuable for reference and is distributed at cost price.*

From this book we learn that there are now nearly 250 sanatoria for the treatment of tuberculosis in the country, the first, of course, being that founded in 1885, by Trudeau, at Saranac. There are 158 dispensaries, devoted exclusively to the disease, all except 35 of which have been established during the past two years. In 1892, the Pennsylvania Society for the Prevention of Tuberculosis was founded; this was the first organization effected for education and preventive work. The rapidly growing interest in the subject, manifested in 1903 and 1904, resulted in the formation of the National Association. In August of 1908 there were 195 special societies and every month there have been additions to the list. The "class" method of instruction has been adopted in some cities and has proven successful. The

first was established by Pratt in Boston and is supported by the Emanuel church. Twenty-three such classes are listed in the directory, but the editor remarks that there are undoubtedly more.

*The Campaign Against Tuberculosis in the United States. Including a Directory of Institutions Dealing with Tuberculosis in the United States and Canada. Compiled under the direction of the National Association by Philip P. Jacobs. 467 pages. Price, \$1.00, prepaid. Charities Publication Committee, 105 East 22nd St., New York City.

Eighteen states have established sanatoria. The date of the first appropriation and the amount of appropriations to August, 1908, in each instance are interesting from a comparative standpoint: Alabama, 1907, \$40,000; Connecticut, 1903, \$120,000; Georgia, 1907, \$25,000; Indiana, 1907, \$30,000; Iowa, 1906, \$100,000, and \$5,000 annually; Kentucky, in 1908, appropriated \$25,000, to be distributed annually to the Association Sanatoria; Maryland, 1906, \$450,000; Massachusetts, 1895, \$675,000; Michigan, 1905, \$108,000; Minnesota, 1903, \$25,000; Missouri, 1905, \$50,000; New Hampshire, 1905, \$50,000; New Jersey, 1902, \$250,000; New York, 1900, \$250,000; North Carolina, 1907, \$15,000; Ohio, 1904, \$35,000; Pennsylvania, 1903, \$1,013,000; Rhode Island, 1903, \$100,000; Wisconsin, 1905, \$185,000.

The total of the appropriations in these eighteen states is over three and one-half millions. Massachusetts was the pioneer in providing state care, and Pennsylvania has been the most liberal.

Michigan has been one of the leaders both in the organization of educational associations and in the establishment of hospitals and dispensaries. From time to time the *Journal* has published most of the following information; it is republished in order that a convenient reference list may be at hand.

LEGISLATION.

The State Board of Health has required notification since 1893. Bulletins to teachers regard-

ing contagious diseases, and tuberculosis especially, were authorized in 1895 and have since been issued.

ASSOCIATIONS.

The Michigan Association for the Prevention and Relief of Tuberculosis (1908). President, C. G. Jennings, M. D., Detroit; Secretary, A. S. Warthin, M. D., Ann Arbor.

Upper Peninsula Association for the Prevention and Cure of Incipient and Contagious Diseases (1907). President, F. McD. Harkin, M. D., Marquette; Secretary, G. N. Orr, M. D., Lake Linden.

Alma Anti-Tuberculosis Society (1908). President, I. N. Brainard, M. D., Alma; Secretary, J. N. Day, M. D., Alma.

Alpena County Anti-Tuberculosis Association (1908). President, Michael O'Brien, Alpena; Secretary, C. W. Williams, M. D., Alpena.

Detroit Society for the Study and Prevention of Tuberculosis (1905). President, S. T. Douglas; Secretary, E. S. Sherrill, M. D., 270 Woodward Ave. On June 9, 1908, over \$10,000 was obtained by "Charity Day." Four visiting nurses maintained.

Anti-Tuberculosis Association of Dowagiac (1908). President, J. H. Jones, M. D., Dowagiac; Secretary, Carrie F. Herkimer.

Grand Rapids Anti-Tuberculosis Society (1908). President, John W. Blodgett, Grand Rapids; Secretary, John Ihlder. Maintains a nurse and a special dispensary. The first society to be formed in the state.

Hastings Anti-Tuberculosis Association (1908). President, G. W. Lowry, M. D., Hastings; Secretary, C. H. Lothrop, M. D., Hastings.

Holland Anti-Tuberculosis Association (1908). President, Luke Lugers; Secretary, E. D. Kremers, M. D., Holland.

Houghton County Anti-Tuberculosis Society (1908). President, Judge Norman N. Haire, Houghton; Secretary, Helen B. Dunston, Hancock. Work carried on among the miners through nine health committees.

Jackson County Association for the Study and Prevention of Tuberculosis (1908). President, N. H. Williams, M. D., Jackson; Secretary, Rev. R. E. McDuff. The association hopes to have

shacks on the grounds of the city hospital by the spring of 1909.

Kalamazoo Anti-Tuberculosis Society (1908). President, Herman Ostrander, M. D., Kalamazoo; Secretary, David Levy, M. D., Kalamazoo.

Marshall Anti-Tuberculosis Society (1908). President, S. K. Church, M. D., Marshall; Secretary, E. B. Stuart, Marshall.

Muskegon Anti-Tuberculosis Society (1908). President, F. W. Garber, M. D.; Secretary, Mrs. Ione Williams, Muskegon.

Owosso Branch of the Michigan Society for the Study and Prevention of Tuberculosis (1908). President, S. E. Parkill; Secretary, Maire S. Brewer. A lecture campaign has been started by the society.

Ottawa County Anti-Tuberculosis Society (1908). President, Rev. S. B. Ford, Coopersville; Secretary, E. D. Kremers, M. D., Holland. Organized by the Ottawa County Medical Society.

HOSPITALS.

Michigan State Sanatorium (Sept. 1, 1907). Located at Howell. For incipient cases only. \$7.00 per week. Those unable to pay cared for as state or county charges. Superintendent, R. L. Kennedy, M. D. Capacity, 38.

Detroit. Tuberculosis Hospital of the Board of Health (July, 1908). No charges. Medical Director, G. L. Kiefer, M. D. Capacity, 25.

Eloise. Wayne County Tent Hospital (1904). For all classes of indigent consumptives. Superintendent, J. J. Marker, M. D. Capacity, 24.

Grand Rapids. Municipal Tuberculosis Sanatorium (June, 1907). \$10.00 per week for non-residents; indigent of Grand Rapids, free. Superintendent, Mrs. Hugo Lupinski.

DISPENSARIES.

Kalamazoo. The Tent Colony. Capacity, 6.

Detroit. Board of Health Tuberculosis Clinic (1906). Open three days a week. Visiting nurse in connection with clinic. Milk and eggs are supplied to the needy. Physician, V. C. Vaughan, Jr., M. D.

Detroit Throat and Chest Free Dispensary (1908), 238 Hastings Street. Supported by a private organization of which H. N. Hovey is president, Physician, E. L. Shurly, M. D.

Free Dispensary of the Grand Rapids Anti-Tuberculosis Society (1908). A visiting nurse is employed. Physician, Collins H. Johnston, M. D.

ASYLUMS.

The Michigan Asylum for the Insane at Kalamazoo has accommodations for 30 tuberculosis patients. Separate wards were opened in 1905. Superintendent, A. I. Noble, M. D.

The Eastern Michigan Asylum at Pontiac maintains separate wards with attached verandas, having a capacity of 35. Superintendent, E. A. Christian, M. D.



The work of the State Tuberculosis Association should be better understood and appreciated by the profession. It is still in its infancy, but it is destined to accomplish much. It was organized in February, 1908. According to the Constitution adopted the State Association consists of local branch societies or committees organized in each town or county of the state. Seventy local committees of organization were appointed, but up to the present time only sixteen of these have organized and only 300 names have been registered as members of the State Association. It is necessary that an active campaign of organization be pushed throughout the state during this coming winter. Funds are greatly needed for the purpose of conducting this organization and a number of important matters must be taken up by the State Association, and for these money is necessary. In the active pushing of the anti-tuberculous campaign during the coming winter, the Association has for its aims the establishment in every county and large town of the state a local branch association, the double function of which will be the consideration of the local problem and the broader State and National aspects of the anti-tuberculosis campaign. State legislation will be sought, a traveling state exhibit will be

formed, local lectures arranged for, movements for additional sanatoria and dispensaries set into action, the introduction of hygienic education into the public schools will be advocated, and the coöperation of all social groups solicited in the furtherance of the educational campaign. The great lesson of the Congress is that of prevention rather than of cure. The cases of incipient tuberculosis not giving off bacilli in sputa may be safely treated at home if possessing at least comfortable means; if unable to meet the circumstances such cases should have proper sanatoria provided for them by the State. Open cases of tuberculosis, that is, cases giving off tubercle bacilli in sputa, must be made safe, either through education or segregation. For a large percentage of tuberculous cases institutional segregation must be carried out in order to protect the community. It has been definitely shown that the decrease in the death-rate from pulmonary tuberculosis in England, New York City, Berlin, etc., is not due to improved local conditions, such as over-crowding, etc., but to institutional segregation. The problem in Michigan, therefore, includes that of institutional segregation and the State Association must take immediate action along this line. Sanatoria for advanced cases must be secured, tuberculous patients must be segregated in our asylums, prisons, state hospitals and county houses.



The Anatomik Footwear Company of Shelton, Conn., is the latest firm to come out with a profit-sharing scheme. For a year or more the company has been advertising in medical journals and it now announces a twenty per cent discount on all orders for shoes at \$15.00 or more made for patients. The physician is to take the measurements, forward the money and pocket the twenty per cent.

The idea of a business firm making agents of the physicians of the country is an old one, and one which has appealed to many firms as a particularly attractive method of disposing of their wares. It has never been successful and never will be. One does not feel flattered by the generous offers of \$3.00 for every pair of shoes one sells. Wouldn't one feel small when the check for the \$3.00 came? It's another phase of the division-of-fee graft.



If physicians advertised. One often hears laymen express the opinion that physicians should advertise in the press, so that the public might learn the qualifications of prospective medical advisors. Were physicians to do so, the public would be able to form less correct opinions than is now the case. An example of what might occur is the following, which has been appearing in the *Detroit Free Press*, under a large picture of the distinguished individual with the distinguished ancestors:

"Dr. E. L. M. Bristol has won a name by his skill and treatment of stomach and intestinal diseases. By an intuitive sense he has become a great diagnostician. Dr. Bristol is a Detroit boy, a son of Charles LeRoy Bristol and Mary Ann Brevoort. His father's people were all heroes in the colonial wars—Patrick Henry, Commodore Perry and the Le-Roys. His mother was the only daughter of Major Henry Bergau Brevoort, and his wife, Catherine de Navarre. Major Brevoort was honored by congress for his gallant behavior on the ship Niagara under Commodore Perry in the battle of 1812 on Lake Erie. During the war of 1812 he was taken prisoner by the Indians. The old Brevoort place on the River road was besieged and the doctor's mother was hidden in the garret. Mrs. Major Brevoort was a direct descendant

of the Duke of Vendome, and first cousin of General Alexander Macomb. Dr. Bristol studied with Dr. J. B. Book, and graduated from the Jefferson Medical College, Philadelphia. He located in New York city, where he became a prominent Mason, being of the thirty-second degree and a member of the Mystic Shrine. He went abroad four different times, visiting all the hospitals of Europe, from the leper hospital in Norway to those in the far east. Gaeta on the Black Sea, Constantinople, Athens, Rome, and all through Italy, Vienna, Berlin, Paris and London. In New York he married Miss Mathilde White, a beauty and great linguist. Her early death was much lamented. Dr. Bristol built the famous Chateau de Navarre, at Stamford, New York. It is the show place of Delaware county and greatly admired. Back of the chateau the Delaware river rises and runs through the woods and grounds of the chateau. An antique sun dial marks the time and the stream flows into a large fountain, the basin is filled with pond lilies of red, white, blue, pink and yellow. Every season the doctor and his sister, Mrs. Barr, give a large fete for the benefit of charity. Dr. Bristol has returned to Detroit to live, having interests and realties in Michigan to look after. Mrs. Frances Barr-Bristol, his sister, the widow of Capt. L. S. Barr, U. S. A., lives with her brother. They are members of Christ church and reside at 610 Jefferson avenue."

What splendid qualifications!



COMMITTEE OF LEGISLATION, MICHIGAN STATE MEDICAL SOCIETY.

Notice.

The committee is informed that the promoters of several proposed legislative bills of interest to the profession, are at this time, and prior to the meeting of the legislature, solicit-

ing the endorsement by medical men throughout the state, of these bills. This committee has not as yet had an opportunity of reviewing these bills, but will make its report and recommendations to the Board of Councilors at its meeting next January, in Detroit. Immediately after this meeting, this committee will send to the secretary of each county medical society its review and recommendations covering these proposed bills, as endorsed by the Council. In the meantime, the committee would earnestly request members to refrain from committing themselves to medical, or semi- or mixed medical legislation, of whatsoever kind.

WALTER H. SAWYER, Chairman.

Book Notices

Modern Medicine: Its Theory and Practice. In original contributions by American and foreign authors. Edited by William Osler, M. D., Regius Professor of Medicine in Oxford University, England. Assisted by Thomas McCrea, M. D., Associate Professor of Medicine and Clinical Therapeutics in Johns Hopkins University, Baltimore. In seven octavo volumes of about 900 pages each, illustrated. Volume IV. Price per volume, cloth, \$6.00, net. Lea & Febiger, publishers, Philadelphia, 1908.

One of the excellent features of this admirable system is the arrangement of the various volumes. It has been so planned that the consideration of affections of any system or allied diseases is confined to one book, not an easy task when one considers the immensity of the work. Another feature of excellence is the choice of the men whose names appear as contributors. It is safe to say that no other so-called system of medicine has had more renowned authors than this, nearly every one of whom is an authority on the particular subject of which he writes.

The fourth volume is divided into three parts as follows: Part I—Diseases of the Circulatory System; Part II—Diseases of the Blood; Part III—Diseases of the Spleen, Thymus, and Lymph Glands.

The first chapter, by Hoover of Cleveland, on "General Considerations in Cardiovascular Diseases," contains a review of the latest knowledge in the physiology of the heart and blood vessels. It serves as a fitting introduction to this section. McPhedran of Toronto contributes the chapter on the Pericardium, and Babcock of Chicago, that on the Myocar-

dium. The latter says that myocarditis of drunkards is due to the increased work thrown on the heart in beer drinkers, and to the impurities of whiskey and the general mode of life of spirit drinkers, rather than to alcohol, per se. Osler writes the chapter on Acute Endocarditis, Diseases of the Valves, Diseases of the Arteries and Aneurism. The section on the prophylaxis of valvular disease is especially commendable. Unusually instructive is Hoover's chapter on the Functional Diseases of the Heart.

Warthin of Ann Arbor has a clear and concise chapter on Diseases of the Lymphatics and also contributes the chapters on the Thymus and Lymphatic Glands in Part III.

One hundred and forty pages are contained in Part II. Cabot, of Boston, writes on Diseases of the Blood. There are a number of plates which bring out the staining of the leucocytes as well as any yet published. Cabot has had a very large experience in this work and the chapters, while not long, are very complete. Pratt, also of Boston, contributes the chapters on purpura and hemophilia. They are well written and bring the subjects up to date in an excellent manner.

Lyon, of Buffalo, describes Diseases of the Spleen, and Warthin, those of the Thymus and Lymphatic Glands. These three chapters comprise Part III.

We understand that this work has had an immense sale. A number equal to five ordinary editions has been sold. There are yet three volumes to appear. Those already issued have been uniformly good.

General Surgery. A Presentation of the Scientific Principles upon which the Practice of Modern Surgery is Based. By Ehrich Lexer, M. D., Professor of Surgery, University of Königsberg. American edition, edited by Arthur Dean Bevan, M. D., Professor of Surgery, Rush Medical College. An authorized translation of the second German edition by Dean Lewis, M. D., Assistant Professor of Surgery, Rush Medical College. 1041 pages, with 449 illustrations in the text, partly in color, and two colored plates. D. Appleton and Company, New York, 1908.

This whole volume is devoted to General Surgery, or what Americans are more accustomed to call the Science and Art of Surgery; it does not profess to touch upon Special Surgery, or the Principles and Practice of Surgery. It therefore has opportunity to elaborate the fundamentals of surgery far better than the average sur-

gical treatise, which dismisses the equivalent subjects in a few chapters. Characteristic German system and thoroughness are everywhere in evidence, not without some German ponderousness and repetition; the American editors, Bevan and Lewis, have made a good translation, quite escaping the usual flavor of German translation, and doubtless bettering the original for American readers. Their interpolations, both original and solicited, add further local atmosphere and enhance its value, as perhaps Lexer himself may acknowledge in the next German edition. The chapters on Blastomycosis, by Ormsby, on blood examinations, opsonins, and the Wright vaccination treatment, by Rosenau, and the abstract of Crile's work on transfusion, represent elements hardly mentioned in Lexer's own work. He is, however, generous in his mention of surgery and surgeons in this country, as even a casual perusal will demonstrate.

Probably the greatest value of the work lies in its exposition of surgery from the pathologic viewpoint. In this it is extremely sound, and indicates the trend of the continental surgeon, who approaches all his problems with a better knowledge of pathology and bacteriology than his peers in this country. As is mentioned in the preface, if one possesses a knowledge of the general principles set forth in this volume, he can enter upon special surgery with a sure ability to apply correct methods of thinking to all cases. It is for the most part a treatise on surgical pathology, brought a little closer to its application in diagnosis, prognosis, and treatment.

A more definite idea is gained in reading the headings of the seven parts, viz.—Part I, Wounds, Their Treatment and Repair; Part II, Wound Infections and Surgical Infectious Diseases; Part III, Necrosis; Part IV, Injuries of Soft Tissues, Bones, and Joints, and Their Treatment; Part V, Important Surgical Diseases Excluding Infections and Tumors; Part VI, Tumors; Part VII, Cysts, not Including Cystic Tumors. It will be apparent that repetitions may occur in such an arrangement, or else a division of information on any given topic; for example, carbolic acid gangrene is discussed in Part I and Part III, with some duplication; thrombosis and embolism are described under Part II and Part V. Otherwise the arrangement is logical and comprehensive. Excellent bibliography is scattered through the chapters.

Thorough as Lexer's book may be, it is hardly superior in many respects to the able mono-

graphs covering the same subjects in recent extensive surgical treatises written and published by Americans. It is compact information in one volume, but it is not always so broad, so readable, and so democratic.

Medical Gynecology. By S. Wyllis Bandler, M. D., Adjunct Professor of Diseases of Women, New York Post-Graduate Medical School and Hospital. Octavo of 675 pages, with 135 original illustrations. Philadelphia, W. B. Saunders Company, 1908. Cloth, \$5.00 net.

Bandler has written an excellent book along more or less conventional lines, taking up gynecological affections as viewed from the standpoints of symptoms, diseases, bimanual and microscopic findings, and the general physical and nervous state. For the practitioner who does no surgery as well as for him who treats practically all gynecological affections surgically, it is a good book and will repay careful study.

The first section (120 pages) deals with methods of examinations and methods of medical treatment. Methods of examining the urethra and bladder are inadequately given. It is hardly sufficient in a book designed to instruct one on diagnosis to say "the cystoscope should be used." Rather too much importance, it seems to us, is attached to intrauterine therapy. The section dealing with pessaries is good. Local massage is advocated in cases where there are "tender spots due to congestion or gouty exudations," whatever the latter may be. Hyperemia is given due consideration. Galvanism for fibroids is recommended in certain cases, happily in a half-hearted way. Eleven pages are taken up with a consideration of the Nauheim Bath.

Amenorrhea, dysmenorrhea and uterine bleedings are well handled. The treatment of leucorrhea is well set forth and in the gonorrheal form, the methods of Bumm are advocated. Some of the details in the chapter on dysuria are not in accord with present-day knowledge, as, for example, "the bacteria most sought for (in cystitis) are the gonococci and the tubercle bacilli." Nearly all authorities on the bacteriology of cystitis agree that the colon bacillus is the cause of a very large percentage of cases of cystitis. The advice to treat tuberculosis of the bladder locally by a method which takes from one to six months, without any attempt to determine the condition of the kidneys (one of which is practically always tuberculous) is not sound. This the author evidently recognizes for he adds;

"In every case of possible tuberculosis, especially if the cystoscope is not used, or when the cystoscope shows the bladder to be healthy, a specimen of urine should be drawn and sent to a pathologist for guinea pig inoculation."

The chapters on "Associated Nervous Conditions" are extremely good, as are those on gonorrhea in children and adults. Other inflammatory conditions, which are well adapted to medical treatment, are fully considered. New growths, whose treatment is essentially surgical, are less fully considered.

The author's style is didactic; his diction, for the most part, good. The illustrations are from drawings by Bosse and are excellent. The proof reading is practically perfect. Like every book put out by this publisher, the press work, paper, and binding leave little to be desired.

The work will probably go through several editions. If so, that small portion relating to the urinary system should be rewritten. A section on appendicitis and another on rectal diseases might properly be added.

On the whole the book can be recommended. Its teaching, with very few exceptions, is sound and methods of diagnosis which every man can learn and employ are advocated. Furthermore it does not require that one be a specialist in order to carry out the recommended treatment.

Pulmonary Tuberculosis and All Complications. By Sherman G. Bonney, M.D., Professor of Medicine, Denver. Octavo of 778 pages, with 189 original illustrations, including 20 in colors and 60 X-ray photographs. Philadelphia, W. B. Saunders Company, 1908. Cloth, \$7.00 net.

It is very seldom that a work covering a special subject has met with such favorable criticism as Bonney's *Pulmonary Tuberculosis*. Without doubt this volume is justly deserving of the praise.

The first 75 pages are taken up with the history and etiology of tuberculosis. The relation of human to bovine tuberculosis is discussed impartially, with the views of the differing noteworthy writers clearly given. The author's conclusions are here happily expressed, and probably agree with those of the majority of clinicians. Modes of invasion are next taken up, and the theory regarding intestinal and respiratory entrance of the germ fully considered. In addition the ever fascinating and much discussed question of hereditary tuberculosis comes up for consideration.

Not as much space is given to the pathology of tuberculosis as might be desired. Some excellent colored plates of gross specimens are included. Under the head of the minute pathology, there is much room for addition, explanations, and illustrations.

Part II is a clinical description of pulmonary tuberculosis. The author makes use of his unlimited experience with the disease, to give accurate, complete, and, at the same time, concise pictures of its various forms. He elaborates on the symptomatology by devoting separate chapters to the effect pulmonary tuberculosis has upon the circulatory, nervous, digestive, and genito-urinary system.

Fort both student and practitioner alike, the sections devoted to physical examination and diagnosis alone merit the purchase of the book. The author covers in detail, and still in a manner that makes for interesting reading, the methods of diagnosis, that should be at the finger ends of every physician.

Beginning with chapter V., Bonney considers the complications of tuberculosis. First he deals with the acute types, and then the more chronic forms, as they affect the various tissues of the body. It is an excellent section.

The treatment of tuberculosis consumes a large portion of the remainder of the book. From every point Dr. Bonney discusses the important phase of prophylaxis, registration, social relations, segregation, sanitation, education, and many other topics are gone into with accuracy and understanding. Climatic treatment, rest, diet, regulation of effort, both nervous and physical, management of complications, and finally a full discussion of vaccine treatment, together with the author's wide experience in this field, conclude the volume.

The illustrations are sufficient for a text of this nature and are well executed. The book is well bound and singularly free from typographical error.

Anyone in the practice of medicine, interested at all in tuberculosis in any form, will find it indispensable, both as a volume full of interesting reading and as a text of reference.

Anatomy, Descriptive and Surgical. By Henry Gray, F.R.S., late lecturer on Anatomy at St. George's Hospital, London. New American edition, enlarged and thoroughly revised, by J. Chalmers Da Costa, M.D., Professor of Surgery and Clinical Surgery, and Edward Anthony Spitzka, M.D., Professor of Anatomy, in the

Jefferson Medical College of Philadelphia. Imperial octavo, 1,625 pages, with 1,149 large and elaborate engravings. Price, with illustrations in colors, cloth, \$6.00, net. Lea & Febiger, Philadelphia and New York, 1908.

The present edition has so modified the appearance of this anatomic classic that students of ten years ago will find difficulty in orienting themselves. There are many alterations in arrangement and in the subject matter, not to mention illustrations and typographical improvements. Histology no longer occupies the first chapter of the book, but is scattered through the various chapters under special headings. Many of the old descriptions are still found intact, but many others are materially changed; it is grateful to find that the editors have preserved Henry Gray's clearness and brevity in descriptive writing. Latin nomenclature is given side by side with the English names, which is a recognition of a change that is sure to prevail in time, while bold-face type emphasizes important words on every page. The section on the nerve system makes the subject plainer than the older editions and is supplemented particularly by good pictures and diagrams.

The success attained in keeping Gray's Anatomy up to date renders it a book that is still necessary to every physician's library.

Neurological and Mental Diagnosis. A Manual of Methods. By L. Pierce Clark, M.D., and A. Ross Diefendorf, M.D., New York. Pp. 188. Price, cloth, \$1.25. The Macmillan Co., New York, 1908.

This is a handy little volume designed rather to give valuable hints to systematic methods than to impart great knowledge upon the science of diagnosis.

Systematic case-taking, methods of examination with reference to possible lesions of the cranial nerves, the development of trunk and muscles, co-ordination, the reflexes, electrical reactions, sensory tests, aphasia—in short all that pertains to the complete neurological examination are very briefly and elementarily considered in Part I.

Part II is designed to aid the student and practitioner in making and recording examinations of insane patients and in acquainting themselves with the more common forms of insanity. To this end the symptomatology of insanity is briefly gone over, hints given as to systematic examina-

tion and a few specimen cases mentioned by way of illustration.

The volume is attractive in size and weight and exhibits those characteristics of Macmillan books, good print and paper.

Photographs illustrate types of the insane. It will serve a useful purpose in giving valuable hints to systematic methods.

Diseases of the Nose, Throat and Ear—Medical and Surgical. By William Lincoln Ballenger, M.D., Professor of Otology, Rhinology and Laryngology, College of Physicians and Surgeons, of Chicago. Octavo, 896 pages, with 467 engravings and 16 plates. Cloth, \$5.50 net. Lea & Febiger, Publishers, Philadelphia, 1908.

Ballenger's Diseases of the Nose, Throat and Ear will be hailed by all practitioners interested in these branches of medicine as a distinct advance in text book literature. It is without doubt the most complete and up-to-date treatise upon these subjects in the English language. It is certainly a relief to get away from the old fashioned empirical laryngology handed down from original editions and to receive in its place modern pathology and a rational mode of treatment, based upon such pathology. The press work and illustrations are all that can be desired.

Both to students and practitioners this work can be heartily recommended as the best single volume upon diseases of the ear, nose and throat with which we are acquainted.

Obstetrical Technique. By Joseph B. Cooke, M.D., Adjunct Professor of Obstetrics in the New York Polyclinic Medical School. Sixth edition, enlarged and fully revised. 12 mo., 21 plates and 26 figures. Pp. 258. Philadelphia, J. B. Lippincott Company, 1908.

This well known little book, first issued in 1900, has been a great help to many a young man starting in practice. It has probably done more to elevate the practice of obstetrics and place it upon the plane where it belongs than any other manual. In it the science of midwifery is combined with the art in just such proportions as are most helpful. Every man beginning practice should read it from cover to cover; indeed, the man who has done obstetrical work in an indifferent manner, even for years, would profit by carrying out the many useful hints to be here found.

Diseases of the Skin. By A. H. Ohmann-Dumesnil, A. M., M. E., M. D., Ph. D., etc. Formerly Professor of Dermatology and Syphilology in the St. Louis College for Medical Practitioners, etc. Third edition. Pp. 606, with illustrations. St. Louis, C. V. Mosby Medical Book & Pub. Co., 1908.

This is a well written manual, covering as much of dermatology as is usually required or desired by the general practitioner. The chapters on diagnosis are simple and clear. Diseases are considered under nine divisions: (1) Disorders of Secretion and Excretion, (2) Hyperemias, (3) Inflammations, (4) Hemorrhages, (5) Hypertrophies, (6) Atrophies, (7) New Growths, (8) Neuroses, (9) Parasites.

Exact modes of treatment are plainly set forth and prescriptions often included.

The illustrations deserve criticism. Some have evidently been taken from photographs bought at a circus, for example, that of the "dog faced boy" and the tattooed woman. Others of common diseases are indistinct, as that of psoriasis on page 264. Figure 16 might represent almost anything, quite as well as a double comedo of the chest.

Colorado Souvenir Book. For the International Congress on Tuberculosis. 7x10 in.; pages 192; paper, postage paid, 25 cents. Published by the Colorado State Association, 823 Fourteenth St., Denver.

In past years more consumptives have probably been sent to Colorado than to any other state. Many do extremely well there, while others receive harm rather than benefit from a residence in the Colorado climate. This book contains much information of extreme value both to the physician who is in the habit of sending away his patients and to the patient seeking a place of refuge. In it will be found articles on the climate with reference to tuberculosis, asthma, hay fever, cardiac affections and nervous disorders. Colorado schools, Colorado as a summer resort, as a camping ground, its industries and detailed information as to sanatoria, physicians, etc., are included, making it a book well worth having at hand when required for reference. It is supplied at less than cost price, and copies may be obtained from the State Association at 823 Fourteenth St., Denver.

Obstetrics for Nurses. By Joseph B. DeLee, M. D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Third revised edition. 12 mo., of 512 pages, fully illus-

trated. Philadelphia, W. B. Saunders Company, 1908. Cloth, \$2.50 net.

The second edition of this book was reviewed in this department last year, and it was stated that this is a little manual of value to the practitioner as well as the nurse. The new edition has been changed but little; nevertheless, it has been improved and can be recommended highly.

Suggestive Therapeutics, Applied Hypnotism and Psychic Science. By Henry S. Munro, M. D., Americus, Georgia. 12 mo., 360 pages. C. V. Mosby Medical Book & Pub. Co., St. Louis, 1908.

Judging from the brief time which has elapsed since the first edition of this book it must have been quite widely read. The preface to the new edition states that it "has been brought up to date by the addition of new material on those phases of the subject upon which advancement has been made during the year." If this is true advancement has been nil, for a careful comparison, page for page, of the two editions reveals two changes, one of 21 lines and one of 32. These alterations (the number of pages and number of lines in the two agree exactly) are of little importance. Why do authors and publishers try to fool us with the "new and revised edition" scheme?

The index has been improved.

International Clinics. Eighteenth Series, Vol. III. Edited by W. T. Longcope, M. D. Pp. 298; illustrated. Philadelphia, J. B. Lippincott Co., 1908.

Among the 25 papers comprising this number are several of special interest. Tissier, of Paris, reports 117 cases of pertussis treated with fluoriform in aqueous solution. Almagi and Mendes, of Rome, describe two cases of tetanus treated with subcutaneous injections of cholesterin. Both recovered and they are inclined to believe that cholesterin fixes the toxin and prevents it from reaching the central nervous system.

Scott contributes a well illustrated study of perforation in typhoid. Melanotic neoplasms are described by Gibbon and Despard. There are several good papers on pediatrics and orthopedics. The Harvey Lecture entitled, "On the Trail of the Subconscious," by Jastrow, Professor of Psychology at Wisconsin, is included and is a valuable contribution.

The four volumes of International Clinics,

which comprise a year, contain over 100 papers, for the most part by men of authority. We believe that the publishers would do well to prepare a general index, in order that these papers may not become forgotten.

The Physicians' Visiting List for 1909. Leather, arranged for 25 patients per week, \$1.00; for 50 patients, \$1.50. P. Blakiston's Son & Co., Philadelphia, 1909.

For fifty-eight years the publishers of this visiting list have put it upon the market, and many a doctor would feel lost were its publication discontinued. It has many excellent features, among them its convenience, its durable binding, its excellent paper, and its admirable arrangement. Its use simplifies bookkeeping. Altogether it is the best of its kind.

The Practitioners' Visiting List for 1909. The Weekly, Monthly and 30-Patient Perpetual contain 32 pages of data and 160 pages of classified blanks. The 60-Patient Perpetual consists of 256 pages of blanks alone. Each in one wallet-shaped book, bound in flexible leather, with flap and pocket, pencil and rubber, and calendar for two years. Price by mail, postpaid, to any address, \$1.25. Lea & Febiger, Philadelphia.

This visiting list contains a scheme is dentition, tables of weights and measures, instructions for urine examination, tables of eruptive fevers, poisons and antidotes, etc. The ruled portions consist of various blanks, adapted for noting all details of practice.

This is the twenty-fifth annual number.

County Society News

Grand Traverse.

At the annual meeting of the Grand Traverse County Medical Society, held November 4, 1908, the following were elected officers of the society for the ensuing year: Dr. F. P. Lawton, President; Dr. E. B. Minor, Vice President; Dr. J. W. Gauntlett, Secretary-Treasurer.

Gratiot.

The annual meeting of the Gratiot County Medical Society was held at Alma November 19,

1908, at which time a goodly number of the medical fraternity were present. Two papers were read, one by Dr. N. F. McClinton, of Alma, on "Prostatitis," Acute and Chronic, and one by Dr. E. T. Lamb, of Alma, on "Acute Bright's Disease." Both papers were good and were much appreciated by the members present. The following resolution was offered and adopted:

Whereas, The people of Gratiot County, in passing the Local Option Law, have incidentally expressed their confidence in medical men to respect their wishes; now, therefore, be it

Resolved, that we, the members of the Gratiot County Medical Society will not prescribe liquors in any case unless we are satisfied they are to be used medicinally.

The officers for the ensuing year were elected as follows: President, Dr. J. N. Day, of Alma; Vice-President, Dr. George W. Petty, of St. Louis; Secretary-Treasurer, Dr. W. M. Drake, of Breckenridge; Member of Board of Censors, Dr. Stiles Kennedy, of St. Louis.

Refreshments were served to the members of the society by the resident physicians after adjournment.

J. N. DAY, *Retiring Sec'y.*

Ionia.

The Ionia County Medical Society held its annual meeting in the Town Club rooms at Ionia, on the afternoon of November 19th.

The following were elected officers for the coming year: President, C. F. Beckwith, Ionia; First Vice-President, T. R. Allen, Ionia; Second Vice-President, George More, Ionia; Third Vice-President, W. R. Grant, Lyons; Fourth Vice-President, J. D. Bradfield, Orange; Secretary-Treasurer, C. S. Cope, Ionia; Censors, R. W. Alton, Portland; J. F. Pinckham, Belding; C. B. Gauss, Palo; Delegate, C. S. Cope, Ionia; Alternate, J. E. Ferguson, Belding.

The time of meeting was changed from quarterly to monthly, with the second Thursday of each month as the day and Ionia as the place of meeting.

C. S. COPE, *Sec'y.*

Isabella-Clare.

The sixth annual meeting of the Isabella-Clare County Medical Society was held October 21, 1908, in the Maccabee hall of Mt. Pleasant.

Election of officers: President, Dr. C. E. Goodwin, Shepherd; Vice-President, Dr. B. F. John-

son, Rosebush; Secretary-Treasurer, Dr. S. E. Gardiner, Mt. Pleasant; Delegate to State Society, Dr. James McEntee, Mt. Pleasant; Alternate to State Society, Dr. C. M. Baskerville, Mt. Pleasant; Directors, H. V. Abbott, Shepherd, 3 years; C. D. Pullen, Mt. Pleasant, 2 years; A. T. Gatchell, Mt. Pleasant, 1 year.

After the regular business meeting, the society was addressed by Dr. E. B. Smith, of Detroit, the subject of the lecture being "Fractures." Dr. Smith gave a very valuable lecture, illustrating the use of various dressings and splints on a living subject.

At 7:00 o'clock a banquet was served at the Hotel Bennett. The dinner was followed by short speeches, short stories, and poetic selections. Plates were laid for the following persons: Dr. and Mrs. Adams, Dr. and Mrs. Baskerville, Dr. and Mrs. Gardiner, Dr. and Mrs. Gatchell, Dr. and Mrs. McEntee, Dr. and Mrs. Pullen, Dr. Richmond, all of Mount Pleasant, Dr. and Mrs. Goodwin of Shepherd, Dr. Smith of Detroit, Dr. McRea of Beal City, Dr. Johnson of Rosebush, Dr. Burch of Gladwin, Drs. Day and Brainard of Alma.

S. E. GARDINER, *Sec'y.*

Presque Isle.

At the annual meeting of the Presque Isle County Medical Society, held at Onaway, November 4th, the following officers were elected: President, Wm. W. Arscott, Rogers City; Vice-President, C. A. Carpenter, Onaway; Secretary, L. C. Kent, Onaway; Delegate to State Society, V. W. Shirley, Onaway; Alternate, Fred P. Nevins, Posen.

L. C. KENT, *Sec'y.*

News

A dinner at the Detroit Club, Thursday evening, Nov. 19, attended by 20 men from Kalamazoo, Flint, Pontiac, Dearborn, Ann Arbor, Ionia, Toledo and Detroit, was made the occasion for the organization of the Detroit Society of Neurology and Psychiatry. It is to meet four times a year and to devote its energy to the study of neurological and psychiatric problems. The society comes into existence

with thirty charter members and the following officers:

President, Dr. C. B. Burr, Flint, Mich.; vice-president, Dr. David Inglis, Detroit, Mich.; secretary-treasurer, Dr. Charles W. Hitchcock, Detroit, Mich. The officers with the two following form the Council: Dr. A. M. Barrett, Ann Arbor, Mich., and Dr. E. A. Christian, Pontiac, Mich.

After the dinner and prior to the ceremonies of organizing, Drs. Inglis and Klingmann presented an interesting case, a probable tumor of the spinal cord.

Dr. Francis Jones has been appointed surgeon for the Grand Trunk Railway at Potterville, to succeed Dr. R. A. Locke, resigned.

Dr. R. S. Copeland's resignation from the faculty of the Homeopathic department in Ann Arbor has been accepted.

Dr. George W. Stewart has been elected mayor of Saginaw on the Republican ticket. He is 43 years old, a member of the county and state societies, and a graduate of the Medical Department of the University of Michigan.

An epidemic of scarlet fever has broken out at the University Hospital in Ann Arbor; every patient who has not been exposed has been moved to the general hospital; those who were exposed are housed in outlying cottages. Strict quarantine is established; senior medical students excused from clinics; a special corps of physicians are attending the cases.

The Shurly Building in Detroit, exclusively for physicians, owned by Dr. E. L. Shurly, was damaged by fire on October 4th. The chief losers were Mr. Seltzer, the druggist, in whose store in the basement the fire started; Mr. Kuhlman, the instrument dealer; Drs. E. L. and B. R. Shurly, W. P. Manton, C. D. Aaron, Eugene Smith, and P. M. Hickey.

Dr. George Dock, formerly of Ann Arbor, now Professor of Medicine at Tulane University, New Orleans, is giving a course of lectures, open to the profession of the city, on "The Diseases of the Ductless Glands." They will be given weekly until February first.

The Jackson County Society has published a neat booklet giving an outline of the post-graduate work for the winter.

Dr. W. M. Donald, of Detroit, gave an address before the Livingstone County Medical So-

ciety at Howell, September 26th, upon "Arteriosclerosis," and before the O. M. C. O. R. O. Medical Society at West Branch, October 21st, upon "Vascular Degenerations."

Dr. F. A. Roberts and Dr. Paul Rose, of Flint, have dissolved the partnership that has existed for a year and a half; the former will remove to offices over the Genesee County Savings Bank, recently occupied by Dr. E. R. Campbell.

Dr. W. F. Waller, recently resident in Hillsdale, has located for practice in Frontier.

The annual ball for the benefit of the Woman's Hospital in Saginaw was given the evening of Thanksgiving Day.

Dr. G. W. Shipman, formerly of Detroit, has located in St. Johns.

Dr. W. F. English, of Saginaw, is seriously ill as the result of an accident on Nov. 13. In responding to a night call, when driving his automobile across a bridge, the draw was open, without gates or lights, and the machine plunged into the river. A tug effected a rescue.

Dr. E. R. Campbell, of Flint, has given up practice, and will go into business with the Buick Motor Company.

An epidemic of measles in Frankfort has necessitated the closing of schools.

Dr. L. E. Knapp, of Fenton, suffered a stroke of apoplexy, while attending a patient in his office, Nov. 4.

It is said that over 11,000 tons of foodstuffs, valued at \$1,500,000, have been destroyed by the food inspectors of Greater New York within a year. The larger part of this was fruit, vegetables, and canned goods.

The Waldorf-Astoria hotel in New York has opened an emergency surgical ward, primarily for the use of its guests, but also, in case of necessity, for temporary accommodation to ambulance surgeons.

Dr. Edward Moriarity, of Mt. Clemens, sailed for Germany on Oct. 22.

Dr. Bertha S. Stuart has been appointed medical director of the Barbour Gymnasium, Ann Arbor.

Cattle in Wayne County have been discovered to have foot and mouth disease, and vigorous

measures are in progress to prevent its progress.

Dr. W. H. Force, a graduate of Detroit College of Medicine, 1908, is practising at Ludington.

Dr. J. O. Keho, recently of Merrill, has removed to Bay City.

Dr. R. M. Woodward has come from Boston to fill the position of surgeon in charge of the U. S. Marine Hospital in Detroit, succeeding Dr. Fairfax Irwin, who was assigned to duty at Arundell Cove, Md., some weeks ago, and who will accompany the new revenue cutter Snohomish in a trip around South America.

The Detroit Society for the Study and Prevention of Tuberculosis, from the receipts of Tuberculosis Charity Day, has organized a system of relief and assistance for persons suffering from pulmonary tuberculosis and extends a cordial invitation to make use of these means for any patients who may be under care for this disease.

The city is divided into districts and for each district there is a visiting nurse. This nurse will be entirely under the doctor's direction in regard to any cases she may visit and will furnish the following things: 1. Usual visits, nursing care, baths, attention to various details of sick-room, instructions in preparing food, etc. 2. Medicines prescribed by the doctor. 3. Sputum cups. 4. Fresh air apparatus, window tents, outside balconies, etc. 5. Instructions in methods of preventing infection of others. 6. Milk and eggs.

Attention is called to the fact that the City Board of Health now examines sputum free, and furnishes jars for collecting same.

In case of indigent patients whose care is inconvenient for the doctor, at our request, medical care will also be furnished. There are a limited number of beds at the Detroit City Tuberculosis Hospital on Hamilton Boulevard.

The Poor Commission has made an appropriation for the improvement and extension of facilities for the care of cases of tuberculosis at Eloise.

The society hopes to be able to do a good deal in the way of educating the public to consult physicians early enough in this disease to enable the treatment to be successful. To this end they will use various methods and cordially invite co-operation (1) by joining the society and (2) by commending the work to patients.

Marriages

H. L. Lown, M. D., to Mrs. Laura Astley, both of Grand Ledge, November 10.

John E. Gleason, M. D., to Miss Eleanor M. Hovey, both of Detroit, November 24.

William D. Whitten, M. D., Baltic, to Miss Gertrude Connor, at Chicago, November 3.

Charles B. Stockwell, M. D., Port Huron, to Mrs. Eva Knaus, Montour Falls, N. Y., at Montour Falls, October 21.

Deaths

Joseph Runtz Hooper, M. D., of Elkton, died suddenly at his home, August 29, from angina pectoris, aged 59.

James C. McBean, M. D., house physician of the West Side Hospital, Detroit, died September 16, from injuries received in an automobile accident, aged 38.

Lewis P. Way, M. D., of New Baltimore, died at his home, September 6, from typhoid fever, aged 54.

Dr. Mary Clark, for many years a practitioner in Battle Creek, died at her home May 31.

John D. Cameron, M. D., of Iron Mountain, died at his home, September 27, from heart disease, aged 57.

Dr. G. V. Randall, of Tecumseh, died, after an illness of three weeks, Nov. 25th. Dr. Randall was a graduate of the University of Michigan and Rush Medical College, and was in his 49th year. He was a member of the Lenawee County and State Medical societies.

Dr. R. J. Shank, a member of the Ingham County Medical Society, died suddenly at his home in Lansing, Nov. 25th, aged 60 years.

Dr. James H. Reed, of Battle Creek, died suddenly Nov. 26th. He was a member of Calhoun County and the State Medical Society.

Lewis T. May, M. D., of New Baltimore, a practicing physician for 25 years, died at his home, Sept. 14, from typhoid fever.

Seymour A. Johnson, M. D., of Kalkaska, for many years a respected and successful practitioner, died at his home, November 5, from cancer of the face and neck, aged 60.

William H. Andrews, M. D., for 31 years a practitioner of Fennville, died at his home, September 22, aged 68.

Charles William Foobridge, M. D., a graduate of the University of Michigan Medical Department in 1877, formerly a practitioner of Northern Michigan, but recently physician to the Red Jacket mine in Montana, died in Helena, Mont., October 16, aged 61.

David Donald Duggan, M. D., died at his home in Battle Creek, November 2, from paralysis, aged 33.

George S. Darling, M. D., Tawas City, probably the oldest practitioner in Iosco County, died in Detroit, October 27, from cancer of the throat.

Charles W. Harwood, M. D., a graduate of the Detroit College of Medicine, died at his home in Sandwich, Ontario, April 6, from pneumonia, aged 63.

Engelbert Frenz, M. D., a well known German practitioner of Saginaw, died in St. Mary's Hospital, November 6, from diabetes, aged 68.

Robert Henry Blaisdell, M. D., of Sheridan, died at his home, August 30, after a long illness, aged 58.

Le Grand Wheeler, M. D., died at his home in Wolf Lake, August 30, aged 76.

The January meeting of the Council will be held at the Hotel Cadillac, Detroit, on Thursday, the seventh of the month. The meeting this year is of unusual interest and importance for two reasons; first, because the question of the State Society taking up the medical defense of its members will be considered, and, second, because matters concerning medical bills in the legislature will come up for discussion.

Every county society has been asked to consider in a general way, whether or not its members are in favor of establishing medical defense, a \$3.00 assessment to be paid in 1909 and \$1.00 yearly thereafter. If sentiment in favor of it is reported the Council will submit a plan, details of which will be sent county societies so that delegates to the annual meeting may be instructed.

According to recent amendments to our by-laws, all legislative questions must first be passed upon by the Council, before taken up by the Committee on Legislation and Public Policy. The optometry bill and the bill for the registration of nurses will be considered.

The councilors will be glad to confer with any members regarding any of these questions, before its January meeting.

Progress of Medical Science

SURGERY

Conducted by

C. S. OAKMAN, M. D.

The Surgery of the Hypophysis. (Pituitary body.) R. PROUST reviews the literature on this subject, mostly of recent date, under three headings:—first, the means of access to the hypophysis; second, the diagnosis of tumors affecting it; third, the results obtained by operation.

The methods of approaching the hypophysis are by the intracranial route, temporal or frontal, and the extra-cranial route, attacking the part through the sphenoid sinus, which is reached by a bucco-nasal, an inter-maxillary, or a nasal incision. The intra-cranial route is impracticable, because of its difficulty, and the danger to brain and large vessels and nerves in relation to the sella turcica. Of the extra-cranial methods the nasal route gives the best approach; the patient is put in the dorsal or the Rose position, the nasal fossae cleaned as well as possible, and the whole nose dissected free, from root to alae, including bone section, and turned downward, with the naso-labial junction acting as the hinge. The frontal sinuses are opened freely, the ethmoid cells opened and entirely removed, with considerable of the vomer, thus exposing the body of the sphenoid, which is then penetrated. This leaves nothing but the cranial wall of the sphenoid sinus and the dura between the operator and the hypophysis; these are carefully traversed and the operation completed according to the pathological conditions found.

The diagnosis of affections of this region is dependent first, upon Roentgenography, which reveals alterations of the sella turcica; second, upon ocular troubles, significant of compression of the chiasm; third, upon the acromegalic syndrome, or the "degenerescence adiposogenitale," of Froelich, due to disturbance of function of the hypophysis. Alterations in the sella turcica are constant in tumors of the pituitary body, and consist in deepening of the bony depression, with accentuation and thickening of its borders, or a flattening of the depression and widening of the entrance. The radiogram shows these changes and also shows the conformation of the bones

and sinuses which have to be traversed in operation. Ocular troubles are due to the fact that the chiasm rests upon this region; any growth causes pressure on the chiasm, first of all on the fibers supplying the nasal side of the retina, and producing hemianopsia, improperly designated "bitemporal hemianopsia." Papillary stasis is not a symptom, but a gradual optic atrophy is noted, chiefly nasal. The acromegalic syndrome is manifested by hypertrophy of the feet, hands, face, thickening of the bones, distension of the sinuses. In certain cases hypophysary tumors produce signs of only an early acromegaly, accompanied by an intense diabetes, such as the case reported by Chauffard and Ravaut. Later stages cause attacks of violent headaches and vomiting. The headaches and pronounced ocular symptoms have heretofore been considered the indications for operation, but Hochenegg thinks there are further possibilities, after having noted a pronounced retrogression of acromegalic symptoms following hypophysectomy. He believes that this disease is due more likely to a hyperfunctionating of the pituitary body, than to a hypofunctionating. In this connection, however, it should be remembered that that gland must *never* be *totally* removed; in experiments upon animals a total ablation is invariably fatal, but a partial removal may succeed.

There have been six cases of hypophysectomy by the nasal route, as follows: Schloffer, 1; Von Eiselsberg, 3; Hochenegg, 1; Bouchardt, 1. Three were undertaken for tumors of the pituitary body, accompanied by "degenerescence adiposogenitale" and troubles due to compression; they resulted in an amelioration of the headache in all, but the eye symptoms were improved in only one; the trophic changes showed a slight betterment in two. Two operations were for tumor, accompanied by acromegaly; one resulted fatally, from infection; the other showed a notable improvement. The sixth case lacked details.—*Journal de Chirurgie*, Paris, October, 1908.

NEUROLOGY.

Conducted by

C. W. HITCHCOCK, M. D.

A New Sign for the Detection of Malingering and Functional Paresis of the Lower Extremities.—Hoover's sign published in August and previously described in these columns (pages 522, Oct. No.) has now been tried by ZENNER of Cincinnati in two cases: first, that of a tumor of the pons in which the right leg was absolutely paralyzed and the left entirely normal. When he lifted the left leg, there was not the least movement of the other but when he tried to lift the paralyzed leg, there was complementary opposition of the sound leg, the heel digging into the couch. Second, in the case of a woman, always easily affected by the sight of blood, the sight of a patient just operated on and upon whom some blood was to be seen, induced an hysterical hemiplegia (right) a half an hour later. Four days later, when the test was applied, there was complete right hemiplegia, blindness of the right eye, deafness of the right ear, and loss of smell in right nostril. When told to lift the right, the paralyzed, leg or to try so to do, there was no complementary opposition of the sound leg,—no movement of either being detected. When, however, she lifted the sound leg,—the complementary opposition was plainly present, the heel digging into the bed.—PHILIP ZENNER in *Journal A. M. A.* for Oct. 17th, 1908.

The Pathogenesis of Tabes Dorsalis.—An article upon this subject thus summarizes its conclusions:

"1. Tabes dorsalis is a secondary degeneration in the posterior columns, due to a chronic meningitis, very probably of syphilitic nature.

2. The arrangement of the meninges surrounding the radicular nerve renders it peculiarly susceptible at that spot to mechanical or toxic injury.

3. The unequal incidence of the affection upon different fibers of the posterior root is probably due to unascertained peculiarity of structure or arrangement of fasciculi, rather than to any selective toxic influence.

4. The lesions tend toward resolution and arrest, even though the process may continue during the life of the individual.

5. With this arrest, regeneration tends to occur in the radicular nerve, the amount in the anterior root being relatively considerable while that in the posterior root is less in amount and functionally insignificant, as a rule.

6. The otherwise inexplicable vasomotor and cranial nerve symptoms and postmortem findings

in this disease are shown thus to be necessary concomitants of the tabetic process.

7. The question of the pathogenesis of the polyneuritic manifestations found in tabetics is not yet answered."—TOM A. WILLIAMS in *Amer. Jour. Med. Sci.* for August, 1908.

The Course and Progress in Disseminated Sclerosis.—Four cases are here cited as illustrative of the varied course of disseminated sclerosis and as indicative of the caution which one should practice in giving an unfavorable prognosis. The author incidentally refers to recurrent attacks in a lady (then 45) which had occurred at intervals since she was 34. The practically complete recoveries had militated against a diagnosis of other than a functional trouble and yet on several visits there was a distinct bilateral Babinski reflex, with absence of abdominal and epigastric reflexes and her later attack was much deeper than had been its predecessors.

In his first case there had been a rapid development of paralysis within three weeks, with diplopia, nystagmus and great mental disturbance. Here there was a gradual recovery in six weeks.

In the second, optic atrophy had been known for two years without other symptoms. An attack of sudden giddiness was followed by marked paralysis deepest at the end of a fortnight. There was apparent complete recovery.

The third case was that of a girl of 22 whose illness of about eight years resulted toward the end of the seventh year in a spastic paralysis with inability to stand. Marked progress toward recovery for nearly a year, then rapid onset of bulbar symptoms and death within a week.

His fourth case had deficient vision and attacks of giddiness two years before this illness which had lasted a year. Then, three months after an acute illness loss of power rapidly developed on left side. There was nystagmus and pallor of right disc, intention tremor of right arm, increase in paralysis of all the limbs as also of intercostal and abdominal muscles and loss of knee-jerks. Sensation was later disordered, then improvement in upper limbs, marked spastic paralysis of lower limbs remaining, but ability to stand. Acutely threatening symptoms persisted for three weeks.

Other cases are referred to in which the progress toward apparent recovery was far less marked than in the cases cited above.—W. B. WARRINGTON in *Review of Neurology and Psychiatry* for Sept., 1908.

PEDIATRICS.

Conducted by

R. S. ROWLAND, M. D.

Interpretation of Blood Examinations.—WILE makes a plea for blood examinations that they be considered as an aid to diagnosis, an adjunct like urinalysis, and that all other data be considered with a blood examination in making a diagnosis.

The different classifications of leucocytes used by various writers are confusing. For practical purposes it is sufficient to group all the lymphocytes under one head, while the polynuclear cells are idvided into neutrophiles, eosinophiles and basophiles. In addition we sometimes have the myelocyte. These five one should be able to recognize.

Blood counts in children are frequently misinterpreted because it is not known that the relative number of the different types of cells varies with the age of the child. WILE gives the following table of average proportions in normal children:

Age.	Percentage Polynuclear Neutrophiles.	Percentage Lymphocytes.
1	35	53
2	38	51
3	42	47
4	47	41
5	52	39
6	52	37
7	53	35
8	54	33
9	55	31
10	60	30

The importance of the relation between absolute count and the relative percentage of polynuclears is emphasized. In general terms the percentage of polynuclear neutrophiles is the relative index of intensity of infection. The total leucocyte count is an index of individual resistance to infection. Thus a high leucocyte count with a low polynuclear percentage in less serious than a low total count with a high percentage of polynuclears.

No diagnosis, the author concludes, save of parasites, should be based simply on a blood examination. That is to say, while hematology offers a wonderful diagnostic agent it does not *per se* offer a diagnosis.—*Medical Record*, Vol. 74, p. 709.

Tumors of the breast in Childhood.—Under the above title Jopson, Speese, and White present a review of the cases of tumors of the breast occurring in childhood that have been reported in

the literature and add the report of two cases coming under their own observation. A majority of those tumors are benign in character and may be divided into two classes, those vascular in origin and those not vascular in origin. The vascular tumors exist as cutaneous, subcutaneous, or intraglandular. The cutaneous variety have the characteristic of naevi occurring elsewhere. The subcutaneous variety are small, nodular, circumscribed, and the overlying skin is healthy. In the case of the intraglandular forms we have true angiomas. The growth may be diffuse or encapsulated. Both sexes are affected and the growth appears in the earliest months of life. If degeneration of the tumor occurs cysts may be present. In some cases the tumor is erectile and painless with the overlying skin normal except for a few enlarged veins.

As to treatment the authors state that the small superficial vascular tumors may be destroyed by the cautery but the larger and more deeply situated ones require removal and in some instances the entire breast may have to be sacrificed.

Benign tumors not vascular in origin may be of various types, commonly fibro-adenoma, lipoma, or cyst.

Twenty-one cases are reported of benign tumors of the breast occurring under the age of sixteen. Of these eleven were fibro-adenomata, six angiomas, one fibro-lipoma, one lipoma, one simple cyst, and one in which the diagnosis was not given. Statistics are given on the age, sex, duration, breast involved, location of the tumor in the breast, result, etc. It is interesting to note that there was involvement of the lymphnodes reported in three cases. In eleven of the twenty-one cases the entire breast was removed.

In considering malignant tumors the statement is made that it is doubtful if any well authenticated case of carcinoma of the breast under sixteen years of age has been reported. Sarcoma is also very rare. The literature, however, contains the records of six cases.

Conclusions—

1. Tumors of the breast while rare in childhood, occur in both sexes and at all ages.
 2. The fibro-epithelial growths are the most numerous groups and next come the angiomas.
 3. Sarcoma of the mammary gland may occur but is rare. The breast enjoys almost complete immunity to carcinoma before the age of puberty.
- Annals of Surgery*, Vol. 48, page 662.

GENITO-URINARY SURGERY.

Conducted by

W. A. SPITZLEY, M. D.

Analysis of the Symptoms in Forty Cases of Suppuration of the Pelvis of the Kidney.—A.

L. CHUTE reviews his own experience. He admits that the tabulation of a larger number of cases might give somewhat different percentage figures. He finds that of his own cases, less than one-half (42.5 per cent) with a history of lumbar pain, or a little over one-quarter (28.5 per cent) could he detect any enlargement of the diseased kidney. Tenderness was present in 38.5 per cent. Casts appeared in 17.5 per cent. Eleven of the forty cases (27.5 per cent) presented neither pain, appreciable renal mass, tenderness or casts. The constant sign is the turbid urine. His next most frequent sign is a disturbance in micturition (85 per cent). Both these symptoms also occur almost constantly in conditions limited to the bladder. In this particular series in 27.5 per cent only these two signs were present. In view of the lack of distinctive symptoms in man renal suppurations and the absolute unreliability of negative findings in these cases, the vast importance of cystoscopy in the study of urinary suppurations is at once obvious.—*Boston Med. and Surg. Journ.*, Sept. 17, 1908.

Acute Hematogenous Infection of One Kidney in Persons Apparently Well.—FARRAR COBB

says that it is not well understood as yet by the profession that in persons apparently in good health septic infarcts of the kidney may be caused by bacteria, usually colon bacilli, circulating in the blood, and that the acute cases of this form of hematogenous infection can present a typical picture of certain of the grave abdominal emergencies,—appendicitis, cholecystitis or visceral perforation, with abdominal tenderness and rigidity, vomiting, high pulse, temperature and leucocytosis.

These infections while comparatively rare are not so infrequent as past experience would show. In all probability they have not been recognized in the early stages of the infection. The author's experience since 1902 includes six cases, one of them operated upon twice, and in the four months from October to February last two cases were operated upon by Dr. Conant, one by Dr. Harrington and three by himself. Johnson an-

alyzed all the cases of surgery of the kidney at the Roosevelt Hospital for eight years preceding October 1, 1908. There were twelve cases operated upon for abscess of the kidney, all but three of which had an undoubted origin in ascending infection and pyelitis. In only three cases was it at all probable that acute hematogenous infection of the kidney had been the origin of the abscess.

Infection of the kidney may be ascending, the urogenous type, or an infection from the blood, the hematogenous type. It may take place also through wounds or by extension from other abscesses in the immediate vicinity of the kidney. In any condition where bacteria are plentiful in the blood stream or in general infectious diseases or where local sepsis exists, hematogenous infection of the kidney can occur provided conditions favor it.

In persons apparently well the onset is usually acute and without warning. The course of the disease may be rapid, with increasing toxic symptoms, or after an acute onset the patient may go for weeks or months in a septic condition. The very acute cases are the ones which simulate most closely abdominal infections.

The chief points of interest in this important condition are the cause, the source and kind of infection and the diagnosis. Some abnormality in the kidney or ureter is the probable cause of the arrest of the bacteria. The infecting bacteria are almost always arrested in the terminal vessels of the cortex close to the fibrous capsule. The blood vessels become choked with microorganisms. Blood passes into the interstitial tissues and in this stage of infiltration, the earliest stage, the infected areas resemble true hemorrhagic infarcts. As the infection goes on a true abscess is formed, separated from the sound tissue by a hemorrhagic margin. The infected areas then resemble minute pus points or septic infarcts. The condition has been aptly named by Dr. Whitney, Surgical Pathologist to the Massachusetts General Hospital, "focal suppurative nephritis."

The colon bacillus is the most frequent form of urinary infection, whether of the kidney or of the bladder. It is now well known that the colon bacillus, under certain conditions, has virulent pathogenic properties; that it is a true pyogenic organism.—*Annals of Surgery*, Nov., 1908.

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